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Creating a "Good" *Olmstead* Plan for People with Serious Mental Illness: An Empirical Evaluation of the Legal Frameworks

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CREATING A "GOOD" *OLMSTEAD* PLAN FOR PEOPLE WITH SERIOUS MENTAL ILLNESS: AN EMPIRICAL EVALUATION OF THE LEGAL FRAMEWORKS

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CREATING A "GOOD" *OLMSTEAD* PLAN FOR PEOPLE WITH SERIOUS MENTAL ILLNESS: AN EMPIRICAL EVALUATION OF THE LEGAL FRAMEWORKS

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Olmstead v. L.C. ex rel Zimring (1999) was a landmark US Supreme Court decision holding that unjustified segregation of people with disabilities is impermissible discrimination; specifically, if the clinician and client believe community integration to be appropriate, the state must have reasonable accommodations in place for the client to be in the community. Enforcement of the *Olmstead* decision for people with serious mental illness has taken many shapes, from the DOJ's settlement agreements requiring substantive development of community mental health services and aggressive community integration protocols, to the Third Circuit approach which requires only lower census numbers in the state psychiatric hospital (SPH). This dissertation, through legal research, identified five distinct *Olmstead* response types (DOJ, Third Circuit, Ninth Circuit, Minnesota, Florida) created by litigation in ten states. Using growth curve models, the present study explored connections between those five response types and fifteen dependent variables: SPH census; state budgets for SPH, community treatment, police, judiciary, and corrections; incarceration rates; suicide rates; employment rates; disability benefits applications, approvals, and recipients; community treatment rates; readmissions to inpatient care within 30 days; and data collection trends.

All states decreased SPH census numbers, but only Minnesota showed an increase in community treatment rates; however, both changes were happening primarily before *Olmstead* litigation. The Ninth Circuit states had lower rates of people on disability benefits, while the Third Circuit had a significant increase in filings for disability benefits immediately after litigation. Suicide rates were much lower in Florida but showed alarming increases in the DOJ state of New Hampshire. Minnesota had greater increases in employment rates after litigation, and all states had slower incarceration rates after litigation. States managed their budgets in different ways after litigation, but overall, there was not an increase in funding for community mental health treatment after litigation outside of DOJ states. DOJ states, the Third Circuit, and Florida had the highest rates of missing data across all variables, while Minnesota had the lowest rate of missing data. Implications, limitations, and future directions are discussed, as well as ideological and ethical considerations for applying *Olmstead*'s requirements with a recovery orientation.

DEDICATION

I dedicate my dissertation to my incredible family, especially my siblings – Alex, Gabe, Marisa, Eli, John, Jacob, Zack, Nico – my parents – Henry and Gina – and my grandparents – Pablo, Blanca, Tommy, and Jeanette. I only had the opportunity to pursue the extremely rare privilege of over twelve years of postsecondary education and training because of the sacrifices, hard work, and pursuit of excellence that characterizes the roots of my family tree. I am grateful and humbled when I think of the years of rigorous work, the immigration journey, the racism, and the financial uncertainty endured by my grandparents to support my parents into being the first members of their respective families to earn a college degree. I could never adequately express my gratitude to my parents, who in turn, supported me with love, high expectations, and unwavering belief in my potential. This document bears not only my name, but our name.

I also dedicate this dissertation to my other family – the family I chose, and who chose me – my partner, Dan Hoelting, and my roommates, the Orchard Street Social Club. Dan – your kindness and generous spirit never fail to amaze me. You make happy things better and sad things lighter. Thank you for always driving so I can work, maintaining our household when I cannot, using Girl Scout cookies to keep me going when I want to quit, and opening our home to what some people would consider to be too many rescue dogs (those people would be wrong). I love our life. To the OSSC – Ellie Rohr, Josh Haby, Matt Nockels, and Melissa Fike – UNL has given me so much, not the least of which was the opportunity to meet you and earn your friendship. You each brought joy and buoyancy to a journey that was long, arduous, and not always rewarding. Thank you for every meal shared, every class endured together, every glass of beer and wine toasted, and every front porch conversation. Let's do family dinner soon.

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First, I gratefully acknowledge my mentor, Dr. William D. Spaulding. Will, it has been an honor and a privilege to work with you for eight years. Your mentorship has afforded me the opportunity to not only learn cutting edge scientific methods, legal theory and analysis, and technical skills, but to understand these concepts in the larger frameworks of recovery and psychiatric rehabilitation. I leave UNL with not only additional knowledge and capabilities, but more importantly, an understanding of my moral and ethical obligations to challenge systems that all too often fail our clients, and to speak truth to power.

I also extend my heartfelt thanks to my committee members, Dr. Rich Wiener, Dr. Mario Scalora, Dr. Eric Evans, and Dean Richard Moberly, for your thoughtful contributions to this project, and my graduate training overall. I am grateful for my colleagues in the Serious Mental Illness Research Group, and for the leadership and guidance of Mary Sullivan, Dr. Joseph Swoboda, and Dr. Jocelyn Ritchie. A special thanks to Jennifer Blank, who was exceptionally helpful with data collection and entry for this project as well as providing feedback on the variable selection and interpretation. I also extend my sincere gratitude to Dr. Amanda Holmgreen and Dr. Eve Brank for your formal, and informal, mentorship over the years. Thank you, UNL – I am so deeply proud of my time here.

I would be remiss if I failed to humbly acknowledge the courage and sacrifices of E.W. and L.C., Frederick L. Nina S., Kevin C., and Steven F., as well as every other plaintiff and plaintiff's attorney in *Olmstead* litigation around the country. Civil rights have never been freely given by the group in power; they must be won. Stigmatization, unjustifiable segregation, and unequal access to the protections of our laws will always prevail without the courage and determination of those who challenge discriminatory systems to demand justice.

DISCLAIMER

From June 2015 through May 2017, I provided psychological services as a Psychology Extern at OUR Homes, an organization that provides assisted-living services and day programming for people with serious mental illness, among other services. OUR Homes was one of many externship sites available for graduate students to gain clinical experience, and one of four clinical externship sites where I provided psychological services during my time as a graduate student. Some have argued that a rigorous application of *Olmstead* requirements would fundamentally alter the way OUR Homes provides its services, an assertion which OUR Homes management and owners contest. My externship was created by a contract between OUR Homes and the University of Nebraska-Lincoln Clinical Psychology Training Program (CPTP). While the externship was a paid experience, my stipend was paid for and guaranteed by CPTP, regardless of which externship I participated in. Thus, my personal finances and doctoral degree would in no way be impacted by any potential changes in business practices required of OUR Homes by *Olmstead*. The idea for this dissertation was inspired by my experiences at OUR Homes, but my analysis is independent.

GRANT INFORMATION

It is with gratitude that I acknowledge my funding source. In June 2017, I began a year-long dissertation fellowship with the Disability Research Consortium of the Mathematica Policy Center, funded by the Social Security Administration. I was provided with a stipend to support me while I worked full-time on my dissertation for a year. I was one of four PhD students nationwide from a variety of disciplines selected with the intention that our dissertation would contribute to the literature on effective and empowering disability policy. My funding was predicated solely upon my proposed dissertation project and was completely dispersed before data collection even began. My funding and participation in the program were in no way predicated upon my findings.

The research reported herein was performed pursuant to a grant from the U.S. Social Security Administration (SSA) funded as part of the Disability Research Consortium. The opinions and conclusions expressed are solely those of the author(s) and do not represent the opinions or policy of SSA or any agency of the Federal Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of the contents of this report. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply endorsement, recommendation or favoring by the United States Government or any agency thereof.

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CHAPTER 1: THE *OLMSTEAD* RULING AND ITS CONSEQUENCES

Olmstead v. L.C. ex rel Zimring (1999) is a United States Supreme Court decision from 1999, written by Justice Ruth Bader Ginsburg, interpreting Title II of the Americans with Disabilities Act (ADA; Americans with Disabilities Act of 1990, 2012). Specifically, the Court held that if a person who has been institutionalized for developmental, mental, or physical disability wants to move into a less restrictive setting and is found to be appropriate for that level of care by a mental health professional, the state must have reasonable accommodations in place to allow that person to do so. Failure to comply with these standards is a violation of the ADA, and not justified solely by a lack of state resources.

Many states subsequently implemented "*Olmstead* plans," especially after the Civil Rights Division of the U.S. Department of Justice began aggressively enforcing *Olmstead* through litigation in 2009 (Civil Rights Division, 2011). Not all circuits interpreted the *Olmstead* case similarly, creating nationally disjointed criteria for a "good" *Olmstead* plan (Tidwell, 2009). Courts also assumed their criteria set would lead to a variety of desired outcomes, which may or may not be true (Tidwell, 2009). Subsequently, *Olmstead* plans vary widely in requirements, outcome objectives, adherence to scientific evidence, and overall quality.

Additionally, much of the litigation around *Olmstead* has focused on people with developmental disabilities or failed to distinguish between people with developmental disabilities and people with serious mental illness. This is problematic; disability policy cannot be effective if it is approached with a monolithic mentality. Implementing *Olmstead* effectively for people with serious mental illness should be done differently

than for people with developmental disabilities, due to differences in clinical needs. In particular, serious mental illness tends to be chronic but episodic, with a reserved place in the treatment continuum for recovery-oriented hospitalization services, either short or long-term, to support people through first episodes or relapses, and back into the community (Spaulding, Montague, Avila, & Sullivan, 2016).

However, for some states, the plans or policies put forward in response to *Olmstead* seem to be merely extensions of the deinstitutionalization policy that gained traction nationally in the 1950s by requiring only long-term hospitalization bed reduction. In fact, the Third Circuit Court of Appeals even looked to the state's "progress" since the 1950s, measured only by institutional bed closings, when evaluating Pennsylvania's compliance with *Olmstead* (Tidwell, 2009, p. 712). This evaluation criteria, if used by itself, is problematic, especially in the context of serious mental illness. While all consumers are negatively impacted by insufficient funding for community treatment options, if courts interpret *Olmstead* to require primarily, or only, a decrease in available hospital beds, this disparately impacts the treatment of people with serious mental illness, for whom the lack of a continuum of appropriate, recovery-oriented treatment services can mean high utilization of crisis services, homelessness, or incarceration.

As the *Olmstead* plans are enacted, consumers can be shuffled between long-term hospitalization settings, short-term hospitalization settings, assisted-living facilities (which fluctuate in degrees of structure and restrictiveness), and living independently in the community with often unreliable access to outpatient care. Since *Olmstead* has been primarily enforced in the courts, examining the relationships between factors on which the courts focused allows for an empirical evaluation of the driving force behind

Olmstead disability policy. The objective of this dissertation is to evaluate the relationships upon which the courts rely, as well as possible unintended potential side effects, specifically within the context of serious mental illness. The over-arching hypothesis is that while the state may achieve the markers the court has identified as relevant, there are still vital treatment considerations not being fully examined, possibly creating unintended collateral damage, similar to that seen during the deinstitutionalization movement of the mid-twentieth century in the United States.

Using data culled from publicly available documents and datasets, the researcher will examine the relationships between state policies and outcomes, both intended and unintended. The empirical question is two-fold: first, do the relational assumptions the courts have made between the criteria they set and the outcomes they demand hold true? Is there evidence the plans could work as the courts expect? Second, if so, are those relationships being enacted at the expense of other outcomes the courts are not considering? Is there evidence the plans are an overall good idea? If the plans do not work, states are expending significant resources to still be subject to liability. If the plans do work, but with unintended collateral damage, states may be creating more challenging situations for all involved.

Consistent with the researcher's interdisciplinary training in clinical psychology and law, this dissertation will contain legal research, psychological research, an empirical analysis, and a legal analysis all related to *Olmstead* and its subsequent impact on mental health law and policy. Chapter 2 will narrowly define and describe the population of interest: people with serious mental illness. Chapters 3, 4, and 5 will outline legal research on federal mental health policy, as indicated by case law and legislation, leading

up to and including the *Olmstead* case and its subsequent litigation. Chapter 6 will review psychological literature related to *Olmstead* and its outcomes, while Chapter 7 will introduce the methods for the empirical portion of this dissertation. Chapter 8 will present the results of the empirical analysis and Chapter 9 will analyze those results and their meaning within the current legal framework, as well as acknowledging this dissertation's limitations and possible directions for future research. Chapter 10 provides recommendations in light of the findings of this dissertation.

CHAPTER 2: SERIOUS MENTAL ILLNESS – IMPACT AND DEFINITIONS

Mental illness continues to be a pervasive public health problem around the world. The DSM-5 defines a mental disorder generally as, "a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities" (American Psychiatric Association [APA], 2013, p. 20). In the United States alone, it is estimated that approximately fifty percent of people will experience mental health symptoms meeting diagnostic criteria for a mental disorder over the course of their lifetime (Mental Health First Aid [MHFA], 2016). Each year, approximately thirty percent of people are experiencing a diagnosable mental disorder (MHFA, 2016). Four of the ten leading causes of disability are mental illnesses; the leading cause of disability worldwide is depression (MHFA, 2016). Sadly, people tend to go ten years, on average, from the onset of symptoms before seeking treatment (MHFA, 2016), and only one of

every three people with a mental illness ever seeks treatment (World Health Organization [WHO], 2001).

Within this discouraging, larger context of high prevalence rates and low treatment proportions of mental illness, exists a small, subpopulation of individuals with serious mental illness (SMI). Definitions of SMI are reliable only in their variation from setting to setting (Substance Abuse and Mental Health Services Administration [SAMHSA], 2016); however, theoretically, the purpose of defining a "serious" group within the population of people with mental illness is to differentiate those with the most significant need for clinical intervention (Goldman & Grob, 2006). In the context of this dissertation, the purpose of an SMI definition is to accurately identify the subpopulation of people with mental illness who are most likely to be impacted by *Olmstead*-related policies; this would include people who have been in or are at risk for long-term hospitalization, frequent or prolonged usage of short-term hospitalization or partial hospitalization, or living in facilities focused on providing environments with varying degrees of structure primarily to people with mental illness (e.g., assisted-living facilities, transitional living facilities, independent living facilities, etc.).

Typically, organizations rely on either the federal definition or their state's definition, as codified in statute, to make these distinctions in their policies. The federal SMI definition applies only to adults and requires a current or recent (i.e., past year) diagnosis of a mental, behavioral, or emotional illness other than a substance use or developmental disorder resulting in "serious functional impairment, which substantially inferences with or limits one or more life activities, such as maintaining interpersonal relationships, activities of daily living, self-care, employment, and recreation."

(SAMHSA, 2016, p. 2). Alternatively, the state of Nebraska has legislatively defined SMI as

> "any mental health condition that current medical science affirms is caused by a biological disorder of the brain and that substantially limits the life activities of the person with the serious mental illness … includ[ing] but … not limited to schizophrenia, schizoaffective disorder, delusional disorder, bipolar disorder, major depression, and obsessive compulsive disorder"

(Nebraska Revised Statutes § 44-792, 2002). The common thread is intended to be severity – while all mental disorders create *significant* distress or disability (APA, 2013, p. 20, emphasis added), the label of SMI should be reserved for those whose experience of mental illness *substantially* impacts their ability to perform daily life activities.

While these definitions narrow the field substantially, they are still too broad to accurately identify the subpopulation of people with mental illness who are likely to be impacted by *Olmstead*-related policies. For example, SAMHSA's definition (2016) and label of "serious mental illness" have been explicitly edited to avoid the words "chronic," "severe," and "persistent" as a conscious choice to expel any connotation that serious mental illness is intractable or unresponsive to treatment (p. 1). The definition was purposefully broadened to include any mental illness (p. 2-3) and to not be limited to chronic conditions (p. 1). While the attempt to dispel perceptions of SMI as untreatable is noble and broadening the criteria may be helpful for some policy discussions, when examining *Olmstead* policies and their impact, it would be most helpful to carefully consider the population most likely to be affected. Additionally, use of a narrower definition avoids a common criticism of SAMHSA's definition – that it has become so broad as to be essentially useless, losing sight of the actual SMI population in a deluge of

those with less chronic, less severe, and less persistent mental illness (Torrey, 2015; U.S.G.A.O., 2014).

For these reasons, this dissertation will encourage a narrower definition of SMI, and employ it when evaluating policies. Rather than only requiring substantial inference in life activities, more precise SMI definitions include aspects of SMI associated with impaired functioning and symptom intensity, such as high rates of service utilization, engagement with partial hospitalization or higher level of services, and length of illness history. One such definition was crafted by Charlwood and colleagues (2000, p. 94) and requires a mental disorder diagnosed by a mental health professional and either a score of 4 (severe/very severe problem) on at least one, or a score of 3 (moderately severe problem) on at least two, of the Health of the Nation Outcome Scale (p. 99-104; not including outcome number five, which is "physical illness or disability problems"), during the previous six months or a significant level of service usage over the past five years (e.g., a total of six months in a psychiatric ward or day hospital, three admissions to hospital or day hospital, or six months of psychiatric community care with more than one worker or the perceived need for such care).

This definition is preferable to the broader definitions for the purpose of identifying a subgroup of those with mental illness in higher need of clinical interventions, more chronically experiencing disability, and subsequently, more likely to be a population needing the protections of *Olmstead*. This definition has the advantage of specificity by narrowing "substantial impairment," a relatively broad description, to a higher threshold of need for services as indicated by problem severity and number. Additionally, by using level of services and time engaged in high levels of service, such

as hospitalization or partial hospitalization, the possibility of including false positives, people with mental illness of a less disabling impact,[1] is diminished. The SMI group is, now by definition, the group within people with mental illness who are using higher levels of service over longer periods of time while facing more problems of intense severity.

It is also worth noting here that while psychiatric diagnostic categories may be the most ubiquitous method of categorizing mental illness, such categorization has many criticisms and is not particularly useful when trying to identify those with SMI and the highest need of services. The modern method of categorizing mental illness by diagnosis is encapsulated in the American Psychiatric Association's publication of the Diagnostic and Statistical Manual, fifth edition (DSM-5; APA, 2013). The DSM-5, and modern psychiatry generally, have their roots in the work of a German psychiatrist from the turn of the 20th century, Emil Kraepelin (Allik & Tammiksaar, 2016; Andreasen, 2007). Kraepelin is best known for being the originator of the nosology preceding the DSM (Andreasen, 2007). Kraepelin's categories identified discrete symptom combinations with a specific illness course, creating a "proto-disease" approach to categorizing mental

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[1] When evaluating definitions of SMI and trying to parse out "more disabling" experiences from "less disabling" experiences, the purpose is not to be dismissive of the impact and suffering created by non-SMI, or "less disabling" experiences of mental illness. All experiences of mental illness deserve to be met with compassion, dignity, and access to high-quality, comprehensive treatment services. By attempting to identify those with greatest need for clinical intervention, the goal and purpose of such categorization is to ensure all people with mental illness have access to high-quality services, not just the easy-to-treat members of the population. Further, it tends to be the more chronically and severely disabled population that faces abuses at the hands of the system, whose voice advocating for herself is most often drowned out, and who most rely on the protections of the Americans with Disabilities Act.

illness, partially inspired by the development of bacterial theories of physical diseases (Kendler & Engstrom, 2017).

When the first two versions of the DSM did not show substantial interrater agreement among clinicians attempting to determine diagnosis, the third and subsequent versions replaced general descriptions with specific diagnostic criteria to create discrete symptom combinations, due in no small part to the revivers of Kraepelin's approach to mental illness – the "neo-Kraepelinians" (Andreasen, 2007). Unfortunately, those categorical, discrete symptom combinations are somewhat arbitrarily defined by contributors to the DSM, without empirical data to show clustering of symptoms or to validate cut-points for diagnosis (e.g., needing five out of nine symptoms as opposed to four or six out of nine symptoms, et cetera) (Insel, 2013). Therefore, while these nosological approaches may increase interrater reliability, they reflect increased agreement on constructs with limited accuracy and clinical utility.

Recently, many researchers and clinicians have begun routinely challenging the usefulness of psychiatric diagnosis and shifting to more functional assessments of mental illness and its impact (e.g., Spaulding, Sullivan, & Poland, 2003). Furthermore, even federal agencies have begun challenging the assumed utility of the neo-Kraepelinian nosology; the National Institute of Mental Health announced in 2013 they would no longer fund research proposals based strictly on DSM-5 criteria, but would instead prefer research examining specific symptoms, such as anhedonia or psychomotor retardation, across diagnostic categories (Insel, 2013). Additionally, recent editions of the DSM have been criticized for overpathologizing normal experiences as abnormal (Frances & Widiger, 2012).

Not only does psychiatric diagnostic categorization have many criticisms of its utility as an organizational framework for understanding differences in the experience of mental illness, it is even less useful as a tool to parse out more chronic and disabling conditions from those with a lower impact on functional impairment. For example, SMI is typically associated with cognitive deficits, such as memory and attention problems, comprehension, motor skills, social skills, executive functioning, and verbal skills, that are directly related to the mental illness but distinct from the clinical symptoms, such as mood dysregulation, hallucinations, or delusions (Medalia & Revheim, 2012). However, such deficits are associated with a range of mental illness diagnoses, including schizophrenia, bipolar disorder, depression, panic disorder, and obsessive-compulsive disorder (Iyer, Rothmann, Vogler, & Spaulding, 2005). These deficits can directly interfere with one's ability to complete day-to-day activities, such as transporting oneself, planning ahead to navigate complex situations, problem-solving, and maintaining stability in employment, financial resources, and housing.

Overall, while the narrowly-defined SMI population is a relatively small subset of the general mental health population, their experience of mental illness is significantly more impactful and disabling. Furthermore, they are the population most likely to participate in the treatment settings impacted by *Olmstead* and its subsequent litigation, such as state psychiatric hospitals and assisted-living facilities. Consequently, this dissertation will focus on the SMI population, as defined here, and the impact of *Olmstead* on their outcomes.

CHAPTER 3: FEDERAL POLICIES ON MENTAL HEALTH BEFORE *OLMSTEAD*

This chapter will briefly review the federal government's approach to addressing mental health issues over time. While a comprehensive discussion of this topic is beyond the scope of this dissertation, there are several turning points in history that are relevant to the questions addressed by this dissertation. Specifically, this chapter will describe the historical background to the *Olmstead* decision, including the context of deinstitutionalization and three major pieces of federal legislation impacting mental health services: the Community Mental Health Act of 1963, the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990.

Mental health treatment in the United States predates the federal government; there were two major treatment facilities for people with mental illness before America was officially the United States of America. The first psychiatric hospital opened in 1752 (National Institute of Health [NIH], 2006), approximately twenty-four years before the Declaration of Independence was signed (Hubenschmidt, 2017). It was established by the Quakers and was quickly required to add additional space due to the influx of admissions (NIH, 2006). Approximately twenty years later, the Virginia legislature appropriated funds for a small, state-run hospital in Williamsburg (NIH, 2006). This hospital was the first of many state psychiatric facilities to come and is still operating today as Eastern State Hospital in a suburb of Williamsburg (NIH, 2006). For the majority of America's history, that is exactly where mental health treatment, especially for the SMI population, took place – in the state psychiatric hospital, without influence or funding from the federal government (Grob, 1983).

State psychiatric hospitals were originally designed as "small, pastoral" therapeutic environments that attempted to provide a "warm, familial atmosphere" with structured, regular activities, including religious and recreational activities (Morrissey & Goldman, 1986, p. 15). In some parts of the world, the mental health system still reflects this approach to treatment (Chen, 2016). However, for most countries, particularly the United States, small, residential units for mental health treatment quickly morphed into larger, custodial institutions, and just as quickly, began encountering shortages of resources, including funding, staff, and space (Morrissey & Goldman, 1986).

By the start of the twentieth century, there were around 150,000 people in state psychiatric hospitals (Morrissey & Goldman, 1986). This swelled to 512,000 by 1950, a growth rate nearly twice that of the general population in the United States, and up to the historical apex of the state hospital census at 559,000 in 1955 (Morrissey & Goldman, 1986). This meteoric rise in hospital population was partially due to calculated moves by local officials to transfer aged, chronic, or senile individuals from the locally-financed almshouses to the state-financed psychiatric hospital (Morrissey & Goldman, 1986). This changed the state hospital population from those in need of acute care and typically hospitalized for fewer than twelve months to "individuals suffering from a variety of diseases and conditions that required custodial care on a life-long basis rather than treatment by specific psychiatric therapies" (Morrissey & Goldman, 1986, p. 19). Unsurprisingly, almshouses disappeared during this time (Morrissey & Goldman, 1986).

Deinstitutionalization and the Community Mental Health Act of 1963

The combination of the rapidly growing hospital population with the lack of resources contributed to the state psychiatric hospitals diminishing significantly in quality and positive outcomes, ultimately leading to the major, national shift in mental health policy known as deinstitutionalization (Grob, 1983). Deinstitutionalization was intended to move people out of the state psychiatric hospitals, which had begun to be seen as inhumane and ineffective, and into the community (Lamb & Bachrach, 2001). Transferring people out of the deteriorating hospitals and into the community was perceived as a moral imperative, an urgent need, and an axiomatic method of improving the quality of life and treatment outcomes of people with SMI (Lamb & Bachrach, 2001). Consequently, deinstitutionalization was not preceded by empirical testing of its assumptions, and mistakes were made in the implementation of the exceedingly well-intentioned national policy on mental health (Lamb & Bachrach, 2001).

While the deinstitutionalization movement was wildly successful at directly decreasing the number of people hospitalized, from approximately 559,000 in 1955 (Bassuk & Gerson, 1978) to approximately 49,000 in 2003 (Bloom, Krishnan, & Lockey, 2008), most professionals agree it was implemented without adequate safeguards to ensure access to appropriate community services. Without adequate safeguards, such as forcing funding to follow people from the hospitals into the community (Kofman, 2012), many people were shifted into assisted living facilities (Geller, 2000), became homeless (Taylor, 1987), or became participants in the trend of prisons and jails housing increasingly high percentages of people with mental illness (Petersilia, 2003). While it is unlikely deinstitutionalization directly caused these issues (Prins, 2011), the lack of

comprehensive community-based services to bolster those coming out of long-term institutions has certainly created obstacles to community integration among those who need the most support (Lamb, 1984).

Comprehensive community-based services continue to be lacking, particularly for those with SMI; it is estimated that 85% of people with SMI are not receiving adequate treatment (Wang, Demler, & Kessler, 2002). This section on deinstitutionalization is included in this dissertation as it offers a useful parallel for the potential trajectory of *Olmstead* plans – laudatory intentions for people with SMI, executed without adequate empirical grounding, leading directly to the primary goal of fewer consumers physically residing in the state hospitals, while unfortunately contributing to a host of unintended, negative consequences.

While arguably the most potent catalyst for deinstitutionalization was the federal legislation creating community mental health centers (Cutler, Bevilacqua, & McFarland, 2003), the state psychiatric hospital population actually peaked about eight years prior to federal intervention, in 1955 with an average daily census of about 559,000 nationally (Grob, 2005). By 1963, the average daily census of the nation's state psychiatric hospitals was around 500,000[2] (Grob, 2005). This gradual, pre-federal intervention decline in the hospital population was largely due to two major players in the field of mental health treatment: the military and psychopharmaceuticals (Cutler, Bevilacqua, & McFarland, 2003; Grob, 2005; Morrissey & Goldman, 1986).

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[2] In 1963, President Kennedy addressed Congress and stated that the state psychiatric hospital census was about 600,000 for people with mental illness and about 200,000 for people with developmental disabilities (American Presidency Project, n.d.). However, academic sources agree the peak was in 1955 at around 559,000 (e.g., Grob, 2005; Bassuk & Gerson, 1978, Morrissey & Goldman, 1986, et cetera).

At the time, the United States military and Veterans Administration (VA) were noted for their high quality of care and ability to successfully treat mental illness outside a hospital setting – advancements that were necessitated by the increase in soldiers suffering from mental health concerns after World War II (Smucker, 2005; Morrissey & Goldman, 1986; Cutler, Bevilacqua, & McFarland, 2003; Grob, 2005). Additionally, the 1950s into the early 1960s saw the advent of several major classes of psychopharmaceuticals, including lithium carbonate (mood stabilizer), monoamine oxidase inhibitors (anti-depressant), haloperidol (typical anti-psychotic), clozapine (atypical anti-psychotic), and benzodiazepines (anti-anxiety), among others (Baldessarini, 2014). These advances combined contributed to the decreasing hospital population starting in the 1950s, opening deinstitutionalization.

However, the Community Mental Health Act (CMHA) signing in 1963 marked a turning point (Morrissey & Goldman, 1986). The CMHA's main promise was to provide federal grants to build and maintain community mental health centers (CMHCs) for four and a half years, after which it was hoped the CMHCs would be self-sustaining (CMHA, 1963). The grants were provided directly to CMHCs, which were in turn required to deliver a variety of services, including outpatient therapy, short-term inpatient, partial hospitalization, and crisis services (CMHA, 1963).

President Kennedy's original vision was grand; he hoped the CMHA would lay the groundwork for all people to receive comprehensive treatment in the community, including the severely mentally ill, and for their families to receive supportive services (American Presidency Project, n.d.; Cutler, Bevilacqua, & McFarland, 2003). He hoped the new network of providers would eventually replace state hospitals completely. While

the goal of wholly eliminating state hospitals is problematic, his intentions seem both noble and born from personal experience; he had family members who had experienced hospitalizations related to mental health concerns.

Unfortunately, President Kennedy's vision for the CMHA was eviscerated before the legislation even reached his desk for signing; due to political concerns of anything resembling "socialized" medicine, negotiations to pass the legislation resulted in funding only being provided for the brick and mortar buildings – no staffing funds were stipulated (Cutler, Bevilacqua, & McFarland, 2003). Within a month of signing the CMHA, President Kennedy was assassinated, leaving supplemental legislation for the CMHA to the Johnson administration. Finally, almost two years later, in 1965, amendments were passed to fund staff for the CMHCs and applications for the grants began rolling in. By this point, the national state psychiatric hospital census on an average day was about 475,000 (Morrissey & Goldman, 1986).

Once CMHCs started appearing around the country, there continued to be problems with their implementation. For instance, the CMHC grants were provided directly to the grant recipient without any required coordination with existing state psychiatric hospitals or state government, leading to disjointed provision of services (Cutler, Bevilacqua, & McFarland, 2003; Shern, Surles, & Waizer, 1989). One major consequence of this was that as people were released from the state psychiatric hospital, their transition to care in the community was often not well coordinated (Bassuk & Gerson, 1978).

Additionally, many CHMCs began serving segments of the general population who had been previously untreated, rather than identifying and prioritizing the people

typically receiving services from the state psychiatric hospital (Morrissey & Goldman, 1986). Furthermore, while the CMHCs were supposed to become self-sustaining after the initial grant period of four years, the assumption that funds would follow individuals from the state hospital into the community was proven false (Bassuk & Gerson, 1978). By the late 1970s, a little over five hundred CMHCs were providing services in the community (Bassuk & Gerson, 1978). By 1980, the nationwide state psychiatric hospital census was approximately 139,000, or a reduction of nearly seventy-five percent from the apex in 1955 (Morrissey & Goldman, 1986). Its estimated that in order to successfully serve that population in the community, there should have been more than three times as many CMHCs as there were (Bassuk & Gerson, 1978).

Despite all of these arguably foreseeable complications, the CMHA had required in the original legislation that the number of state psychiatric hospital beds be cut in half within twenty years (CMHA, 1963), a benchmark which was swiftly met, well before the deadline (Morrissey & Goldman, 1986). Unfortunately, while deinstitutionalization was wildly successful at cutting funding and space in the nation's hospitals, it failed in creating appropriate spaces and resources for people with SMI in the community. This led to the lamentable situation of transinstitutionalization – the transfer of the population who historically received services in the state psychiatric hospital to other institutions, such as nursing homes, assisted-living facilities, and the criminal justice system. While people were exiting the state hospitals at high rates, the national rate for people in all institutional settings did not fluctuate (Scherl & Macht, 1979).

Transinstitutionalization was created by a number of mechanisms, each enabling different pathways to alternative institutions. For example, when Medicaid was

implemented in the 1960s, consistent with prevailing federal policy encouraging people to receive treatment in the community, the funds were ineligible for use at psychiatric hospitals, but commonly used at nursing homes, creating a financial incentive for people to transfer from state psychiatric hospitals (Grob, 2005). While nursing homes were in the community, and therefore ideologically preferable, they were not typically housing people with SMI, creating difficulties in delivering high-quality care (Bassuk & Gerson, 1978).

Additionally, people with mental illness have become increasingly overrepresented in our criminal justice system and are currently present at two to four times the rate of the general population (Prins & Draper, 2009). This overrepresentation could stem from a number of etiologies. The stress of interacting with the criminal justice system could exasperate preexisting mental health symptoms or genetic vulnerabilities (Ingram & Luxton, 2005). Alternatively, people with mental illness sometimes draw the attention of law enforcement personnel, becoming a part of the criminal justice system, rather than receiving treatment in the community, where services are typically underfunded and disjointed (Petersilia, 2003). Often, law enforcement personnel are called, even by mental health providers, to address abnormal or maladaptive behavior and police may have few alternatives to an arrest (Teplin, 2000). To add insult to injury, once people with mental illness are part of the criminal justice system, they are more likely to fail community supervision than their general population counterparts (Skeem & Eno Louden, 2006), keeping them in the system for longer and with potentially compounding severity of sentences.

Beyond the fact that deinstitutionalization was essentially untested and hastily implemented national policy on mental health treatment, a major contributor to its complicated, long-term impact on people with SMI was that its' advocates and planners failed to adequately take into consideration the heterogeneous needs of an SMI population. SMI is typically associated with cognitive deficits, such as memory and attention problems, comprehension, motor skills, social skills, executive functioning, and verbal skills (Medalia & Revheim, 2012). These deficits can independently interfere with one's ability to complete day-to-day activities, such as transporting oneself, problem-solving, and maintaining stability in employment, financial resources, and housing. Therefore, they must be accounted for in any policies attempting to help people with SMI function more independently in the community.

Overall, deinstitutionalization was a well-intended shift in national mental health policy, but its implementation resulted in a fragmented system, complicated by transinstitutionalization. While this dissertation is certainly not advocating a return to the treatment model of the 1950s and prior, it is advocating policymakers learn from the mistakes of the past. Many people benefitted from deinstitutionalization, and CMHCs did provide valuable treatment services to a section of the population who had been untreated previously. However, many people with SMI fell through the cracks and into our nursing homes without access to comprehensive psychiatric care, or into our jails and prisons with their liberty still restricted, but now in a non-therapeutic environment.

The disparity between the promise of deinstitutionalization and its long-term impact is perhaps best illustrated by comparing two quotes from one man, Dr. Robert Felix, the director of the NIMH in 1964 (Lyons, 1984). In 1964, he was quoted as

saying, "The needs of the mentally ill are urgent, however, and the public demand that they be met is so widespread that it is impossible to await completion of comprehensive planning before initiating other facets of the program to meet the needs and the demands." Twenty years later, he reflected, "Many of those patients who left the state hospitals never should have done so. We psychiatrists saw too much of the old snake pit, saw too many people who shouldn't have been there and we overreacted. The result is not what we intended, and perhaps we didn't ask the questions that should have been asked when developing a new concept, but psychiatrists are human, too, and we tried our damnedest." As *Olmstead* plans are designed, implemented, and evaluated, savvy policymakers should be mindful of these lessons from deinstitutionalization.

Rehabilitation Act of 1973

While it is beyond the scope of this dissertation to review every piece of federal legislation proposed or passed related to mental health in the twentieth century and beyond, after deinstitutionalization and the CMHA, there were two major pieces of federal legislation laying the groundwork for the *Olmstead* case: the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (*Olmstead v. L.C. ex rel. Zimring,* 1999). The ADA and the Rehabilitation Act are complimentary pieces of legislation that fit together to provide comprehensive protections against discrimination for people with disabilities (Leuchovius, 2003). The Rehabilitation Act preceded the ADA temporally and the ADA functioned essentially as an extension of the protections that were first codified in the Rehabilitation Act (Leuchovius, 2003). Not only are both acts discussed

individually in the *Olmstead* opinion, but their language differences are used as a source of information in the *Olmstead* case to interpret Congressional intent regarding the ADA.

The Rehabilitation Act of 1973 has its roots in federal legislation as far back as 1917 (Steffen, 2010). To aid soldiers returning from World War I experiencing "shell shock" or trying to readjust to life after a major injury, such as the loss of a limb, Congress passed three major laws in relatively quick succession: the Vocational Education Act of 1917, the Soldier's Rehabilitation Act of 1918, and the Vocational Rehabilitation Act in 1920. The latter established the Office of Vocational Rehabilitation. State participation in the programs was not mandatory, but by 1920, three-quarters of the states were participating in the vocational rehabilitation program, and by 1930, a total of forty-four of the then forty-eight states were participating. The program was made permanent in 1935.

Over time, the vocational rehabilitation programs expanded not only their geographic span, but also their participation eligibility guidelines (Steffen, 2010). In 1940, the requirements broadened to more generally included people with physical disabilities and those who were currently employed, but who could benefit from services to maintain continued employment. In 1943, this was further extended to include people with mental illness.

The office of vocational rehabilitation enjoyed consistent congressional support over the years, and in 1973, the Vocational Rehabilitation Act was replaced by the more comprehensive Rehabilitation Act (Rehabilitation Act of 1973, 2012). Congress explicitly stated that its intent in replacing the Vocational Rehabilitation Act was to

expand vocational rehabilitation grants for the states while carefully reserving resources and services for those experiencing the most debilitating disabilities.

While the majority of the Act is outlining expected administration of services and funding within the state vocational rehabilitation offices, such as requiring studies of services provided and individualized treatment plans, the portion most relevant to *Olmstead* is Title V, specifically § 504 (Rehabilitation Act of 1973, 2012). Title V generally prohibits discrimination on the basis of a disability in employment in the federal government or its contractors, and § 504 specifically states,

> "no otherwise qualified handicapped individual in the United States, [defined as any individual who (a) has a physical or mental disability which for such individual constitutes or results in a substantial handicap to employment and (b) can reasonably be expected to benefit in terms of employability from vocational rehabilitation services], shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

Title V as a whole was an important expansion upon prior versions of vocational rehabilitation legislation because it extended beyond just authorizing and funding services to actively requiring non-discrimination in both employment and access to services by federal agencies, federal contractors, and organizations receiving federal funds (Leuchovius, 2003). While its protections were clearly limited by being applicable to only federal or federally funded agencies, it was an important civil rights protection law for people with disabilities that laid the groundwork for the Americans with Disabilities Act of 1990 (Leuchovius, 2003).

Americans with Disabilities Act of 1990

The ADA was heavily influenced by the Rehabilitation Act, particularly § 504 (Leuchovius, 2003). Congress determined that the Rehabilitation Act alone, especially in light of its limitation in applicability to only federal and federally funded agencies, was inadequate protection against the discrimination faced by people with disabilities (Leuchovius, 2003). Using its power under the commerce clause of the United States Constitution, "power to enforce the fourteenth amendment," and any other power within "the sweep of congressional authority," Congress enacted the ADA in 1990 (Americans with Disabilities Act of 1990, 2012, § 2).

Where the Rehabilitation Act offers people with disabilities protections in their interactions with federal and federally funded agencies, the ADA offers protections in their interactions with state, local, and private organizations with at least fifteen employees (Leuchovius, 2003). Title I prohibits discrimination on the basis of disability in employment, Title II prohibits discrimination in public services, including transportation, Title III prohibits discrimination in public accommodations and services operated by private entities, and Title IV prohibits discrimination in telecommunications (Americans with Disabilities Act of 1990, 2012). Title V contains miscellaneous provisions, such as allocation of responsibility for attorney's fees, barring someone who is facing employment consequences due to drug use from being included in the definition of "individual with handicaps," and excluding homosexuality, bisexuality, and "transvestites" from inclusion as disabilities (Americans with Disabilities Act of 1990, 2012, §§ 501-514).

Congress explicitly stated in its findings that the approximately 43 million people with disabilities in the United States "are a discrete and insular minority" with a history of "political powerlessness" exposed to "purposeful unequal treatment" due to characteristics beyond their control, and the association of those characteristics with stereotypes about the individual abilities of people with disabilities (Americans with Disabilities Act of 1990, 2012, § 2).[3] Furthermore, Congress described the isolation and segregation of individuals with disabilities to be a form of discrimination that "continue[s] to be a serious and pervasive social problem" in many areas, including institutionalization, housing, health services, and access to public services (Americans with Disabilities Act of 1990, 2012, § 2). In articulating the purpose of the Act, Congress pronounced their intention to be, *inter alia,* "to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities" (Americans with Disabilities Act of 1990, 2012, § 2).

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[3] Here, Congress is invoking language associated with Equal Protection Clause jurisprudence (U.S. Const. amend XIV, § 5). In *United States v. Carolene Products Company* (1938), United States Supreme Court Justice Harlan Stone added a famous footnote to the Court's analysis. While the main analysis of the Court in that case involved minimal scrutiny, in footnote four, the Court indicated that if a "discrete and insular minority" – essentially, a group without power in the political process to protect themselves – was being negatively impacted, the level of scrutiny applied by the Court may need to be heightened to ensure the protection of the vulnerable group. "Discrete and insular minority" evolved over time to include factors such as whether the group has been historically mistreated or discriminated against, if they are being categorized based on immutable characteristics (characteristics that are not changeable, like race, or should not be required to change, like religion), or if the categorization reflects a prejudice rather than a permissible government objective (Strauss, 2011). The reasoning behind heightened scrutiny for this population is that if they are historically mistreated by the government and unable to protect themselves through the political process, the Court may need to be more aggressive in its consideration of the constitutionality of laws impacting them, triggering a stricter scrutiny.

As the *Olmstead* case arose under subtitle A of Title II (*Olmstead v. L.C. ex rel. Zimring,* 1999), this review will focus on that section, and examine others only insofar as they are enlightening comparisons. The Department of Justice, Civil Rights Division, (DOJ) was tasked with regulating and enforcing Title II, subtitle A (Americans with Disabilities Act of 1990, 2012, § 204). Congress used remarkably broad language, which the DOJ interpreted as "intended to extend to 'anything a public entity does'" (Eyer, 2005, p. 276). Public entity was defined as any state or local government, including all instrumentalities of state and local governments (Americans with Disabilities Act of 1990, 2012, § 201).

Qualified individuals with a disability were described as people with a disability who meet the essential eligibility requirements for receipt of services from a public entity or participation in public programs, with or without reasonable accommodations (Americans with Disabilities Act of 1990, 2012, § 201). Title II decrees that "no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity" (Americans with Disabilities Act of 1990, 2012, § 202). It is noteworthy that the language is almost exactly the same as § 504 of the Rehabilitation Act of 1973 (see Table 1). The most prominent difference between the two is the omission of the word "solely" in the ADA's language regarding the cause of discrimination ("solely by reason of" versus "by reason of").

Title II refers back to the remedies outlined by the Rehabilitation Act for violations of § 504 (Americans with Disabilities Act of 1990, 2012, § 203), which in turn

refers back to the remedies from the Civil Rights Act of 1964 (Rehabilitation Act of 1973, 2012, § 505). Available remedies include injunctions and appropriate affirmative action, which can be pursued as part of a civil action filed by the Department of Justice or the aggrieved person (Civil Rights Act of 1964, 2012, §§ 706, 717; Rehabilitation Act of 1973, 2012, § 505; Americans with Disabilities Act of 1990, 2012, § 203). In the event the plaintiff is successful in their lawsuit, if they are a private citizen, they may recover reasonable attorneys' fees and associated litigation costs (Civil Rights Act of 1964, 2012, §§ 706, 717; Rehabilitation Act of 1973, 2012, § 505; Americans with Disabilities Act of 1990, 2012, § 203).[4]

Finally, before leaving the ADA, it is worthwhile to note the difference in language between the prohibition of discrimination in public services in Title II and the prohibition of discrimination in employment in Title I, as dissenters in the *Olmstead* opinion used this distinction to bolster their argument. In Title I, discrimination based on disability in employment is prohibited by a "general rule" barring discrimination "against a qualified individual with a disability because of the disability of such individual in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other" aspects of employment (Americans with Disabilities Act of 1990, 2012, § 102). The subsection on the general rule is immediately

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[4] Subsequent to the passing of the ADA and the *Olmstead* decision, the Supreme Court endorsed an as-applied approach to determining whether a private litigant can overcome state sovereign immunity when suing under Title II of the ADA (see *Tennessee v. Lane*, 2004). For some areas of Title II's applicability, a private litigant may be unable to overcome the state defense of sovereign immunity, although in some areas, such as access to the courts, the ability of private litigants to sue has been upheld (*Tennessee v. Lane,* 2004). However, nothing in this line of cases impacts the ability of the Department of Justice to sue states over Title II violations.

followed by a subsection on construction, which details that the term "discrimination" in the general rule subsection is intended to include, *inter alia*, "limiting, *segregating*, or classifying a job applicant or employee in a way that adversely affects the opportunities or status of such applicant or employee because of the disability of such applicant or employee" (Americans with Disabilities Act of 1990, 2012, § 102, emphasis added).

The construction subsection goes on to expound the ways in which an employer could potentially discriminate against a job applicant or employee, including participating in a contract that subjects the person with a disability to discrimination, discriminating against a qualified person because of their relationship to a person with a disability, or using qualification standards that tend to screen out people with disabilities, if those qualification standards are not related and necessary (Americans with Disabilities Act of 1990, 2012, § 102). The construction of "discrimination" actually extends liability for discrimination beyond just the employer-employee relationship into the relationships of the employer with other businesses and the employee's personal relationships. Where Title I's construction subsection is rather comprehensive, Title II does not have a construction subsection – only a comparable general rule against discrimination (Americans with Disabilities Act of 1990, 2012, § 202; see Table 1 for exact language from Title II).

Title II, subtitle A is remarkably brief overall, especially when compared to other titles in the ADA. It contains only the definition of a public entity and a qualified person (§ 201), a general prohibition of discrimination (§ 202), a reference back to the Rehabilitation Act for available remedies (§ 203), a section tasking the Department of Justice with developing appropriate regulations (§ 204), and an effective date (§ 205)

(Americans with Disabilities Act of 1990, 2012, §§ 201-205). Perhaps its brevity is partially responsible for the difficulty the United States Supreme Court had in agreeing on its interpretation.

CHAPTER 4: THE SUPREME COURT'S *OLMSTEAD* RULINGS

Over forty years after the start of deinstitutionalization, twenty-six years after the Rehabilitation Act of 1973, and nine years after the ADA, the United States Supreme Court decided the *Olmstead* case (*Olmstead v. L.C. ex rel. Zimring*, 1999). *Olmstead* arose from the situation of two plaintiffs in Georgia. The first plaintiff, L.C., was previously diagnosed with schizophrenia and voluntarily admitted to Georgia Regional Hospital (GRH) in Atlanta in May 1992. A year later, her treatment team determined she was sufficiently improved to warrant treatment in a state-run community-based treatment program. However, the State failed to actually move her into a community-based treatment program for nearly three more years, until February 1996.

The second plaintiff, E.W., was also voluntarily admitted to GRH, but with a prior diagnosis of a personality disorder. She arrived at GRH in February 1995 and one month later, GRH attempted to discharge her to a homeless shelter. This attempt was stopped short after her attorney filed an administrative complaint. Her treatment team also determined she was sufficiently improved to warrant treatment in a state-run community-based treatment program within a year. However, the State also failed to actually move her into a community-based treatment program for over a year, "until a few months after the District Court issued its judgment in this case in 1997" (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 593).

Procedural History

In May 1995, L.C. filed this lawsuit alleging her continued institutionalization against her will and the advice of her treatment team violated, *inter alia,* Title II of the ADA.[5] She requested access to the community-based treatment program and "treatment with the ultimate goal of integrating her into the mainstream of society" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 594). E.W. soon joined the lawsuit with matching allegations and requests.[6]

At the District Court level, the plaintiffs won via partial summary judgment (see Figure 2 for visual depiction of procedural history). The court agreed the State was in violation of Title II of the ADA because "unnecessary institutional segregation of the disabled constitutes discrimination *per se*" under Title II (1997 WL 148674, p. 37a). The lower court rejected the State's argument they were not *discriminating* on the basis of disability, but merely out of funds (*Olmstead v. L.C. ex rel. Zimring,* 1999, emphasis added). The court not only spurned the State's attempt to use its limited funds to prove there was no discrimination, but it also barred the fact of limited funds from sustaining an

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[5] L.C.'s initial complaint also alleged her continued institutionalization under these conditions violated 42 U.S.C. § 1983 and the Due Process Clause of the Fourteenth Amendment (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 588, 593). However, the lower court decided the case by interpreting the ADA and never reached the constitutional claim or the § 1983 claim. Subsequently, the appeals were confined to consideration of the alleged ADA-based violation.

[6] The Court noted that while both E.W. and L.C. were receiving community-based treatment by the time this case came before the Court, "the case is not moot. As the District Court and Court of Appeals explained, in view of the multiple institutional placements L.C. and E.W. have experienced, the controversy they brought to court is 'capable of repetition, yet evading review'" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 594, footnote 6).

affirmative defense that the required transfers were not "reasonable modifications" as they would "'fundamentally alter' the State's activity" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 594). In reaching its decision against the affirmative defense offered, the lower court noted Georgia had state-run community-based treatment programs that required fewer financial resources per consumer than the state hospital.[7]

The State appealed. The Court of Appeals for the Eleventh Circuit affirmed the decision of the lower court in part. The Court of Appeals agreed with the District Court on the issue of discrimination, and further specified that when a treatment team recommends a community-based treatment program, "the ADA imposes a duty to provide treatment in a community setting – the most integrated setting appropriate to that patient's needs" (138 F. 3d 893, p. 902).

However, the appeals court rejected the lower court's response to the State's cost-based affirmative defense. The District Court's response seemed to ban any argument that the financial burden of services would fundamentally alter the State's programs. Instead, the appeals court indicated the District Court, on remand, should consider "whether the additional expenditures necessary to treat L.C. and E.W. in community-based care would be unreasonable given the demands of the State's mental health budget" (138 F. 3d 893, p. 905).

Prior to the District Court's opportunity to reconsider the case on remand, the United States Supreme Court granted certiorari "in view of the importance of the

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7 In the plaintiffs' brief to the United States Supreme Court, they noted that the federal Department of Health and Human Services approved up to 2109 Medicaid home and community-based care waiver slots for Georgia, but the state only used 700 (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 601).

question presented to the States and affected individuals," at least partially because twenty-two states and the territory of Guam all formerly requested the Supreme Court grant certiorari (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 596). Between the Court granting certiorari and deciding the case, the District Court decided the original case on remand, using the broader consideration of the fundamental alteration defense required by the appeals court. Unsurprisingly, when considering the cost of treating two people in light of the State's entire mental health budget, the change in treatment was not considered "unreasonable" or fundamentally altering the services (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 596, footnote 7). The State also appealed that decision, which was pending before the Eleventh Circuit Court of Appeals at the time the United States Supreme Court announced its opinion on the original case.

Majority and Plurality Opinion

Justice Ruth Bader Ginsburg wrote the opinion of the Court. The opinion she wrote is divided into multiple parts. Only the first four of the five sections of her opinion received the necessary five votes, and thereby, represents a majority opinion of the Court. However, six Justices voted in favor of the final judgment. Additionally, there are several concurrences and dissents, indicating a high level of disagreement on the Court for the proper resolution of this case.

In the brief introduction, the issue in the case is described as "concern[ing] the proper construction of the anti-discrimination provision contained in the public services portion (Title II) of the [ADA]" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 587). The Court also briefly stated its ultimate conclusion – affirming the decision of the appeals

court in substantial part, but also remanding "for further consideration of the appropriate relief, given the range of facilities the State maintains for the care and treatment of persons with diverse mental disabilities, and its obligation to administer services with an even hand" (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 587).

After this introduction, the Court reviewed the relevant portions of the ADA upon which it would rely in reaching its decision in Part I. Part I received five votes (Justices O'Connor, Souter, Breyer, and Stevens joined Justice Ginsburg) and is considered part of the opinion of the Court. The Court noted Congress had made several germane findings in the introduction to the ADA, including that historically, people with disabilities have often been segregated from society, that discrimination endures in the area of institutionalization, and that such "forms of discrimination… continue to be a serious and pervasive social problem," (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 588-589). The Court acknowledged Congress's intent for the ADA to abolish discrimination against people with disabilities. The Court also quoted the general prohibition of discrimination in public services from Title II, as well as the definitions of public entity and qualified person, and the section tasking the Department of Justice with issuing regulations enforcing this subtitle of the ADA.

In footnote one, the Court recognized that the ADA builds upon and extends the Rehabilitation Act as well as other prior legislation but is the first time Congress has explicitly recognized segregation and institutionalization as domains of discrimination against people with disabilities. The Court additionally noted that Title II, subtitle A of the ADA is entwined with the Rehabilitation Act in several important ways, including similar remedies and required regulatory coordination. The Attorney General was

responsible for both sets of regulations, and in both sets, there is an emphasis placed on providing services "in the most integrated setting appropriate to the needs of" the person with a disability (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 591-592). In the Title II regulations, the Attorney General further specified that an integrated setting is one where the person with a disability is able "to interact with non-disabled persons to the fullest extent possible" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 592).

Another Title II regulation compels any entities providing public services to engage in reasonable modifications to prevent discrimination. A modification is not considered reasonable if it "would fundamentally alter the nature of the service, program, or activity" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 592).[8] Finally, in footnotes, the Court quickly touches on the ADA definition of disability, remedies available, and the other portions of Title II, related to transportation.

Part II also received five votes (Justices O'Connor, Souter, Breyer, and Stevens joined Justice Ginsburg) and is considered part of the opinion of the Court. Here, the Court provided the facts of the case, including its procedural history. Part III is divided into three subparts: an introduction, subpart A, and subpart B. The introduction and III-A received the same five votes as Part I and II of the Court's opinion, but III-B lost Justice Stevens's vote, although the final judgment of the Court did receive six votes. Part III-A addressed the question of whether there was discrimination in this case, while Part III-B tackled the limits of the "fundamental alteration" defense.

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[8] The Court noted that while the controversy in the case touches the regulations, it is about the interpretation of the regulations, not their validity or the appropriate amount of deference to the agency providing them (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 592).

Justice Ginsburg began Part III by noting the Attorney General's two key findings in creating regulations for Title II: 1) that a lack of integration is a form of discrimination based on disability, and 2) that while the State had a responsibility to avoid discrimination, that charge is limited to reasonable modifications. In Part III-A, the Court held that continued institutionalization against the will of the person with a disability and against the recommendations of their treatment team was unjustified segregation, which the Department of Justice has consistently argued is discrimination under the ADA. As the Department of Justice is the regulating agency for the relevant portion of Title II, "its views warrant respect" (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 598), and "may [be] properly resort[ed to] for guidance" (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 598, quoting *Skidmore v. Swift & Co.*, 323 U.S. 134, 1944, p. 139-140).

The Court rejected the argument of the State and the dissent that there was no discrimination in this case because the plaintiffs "were not denied community placement on account of [their] disabilities" and there is no comparison group of similarly situated individuals without a disability who received preferential treatment – only some people with disabilities receiving treatment in the community while some remain in an institution (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 598). The dissent further argued "this Court has never endorsed an interpretation of the term 'discrimination' that encompassed disparate treatment among members of the *same* protected class" (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 616).

The Court responded with three counterpoints to rebuff the arguments of the dissent and the State. First, the Court looked to Congressional intent for the statute in question and its regulations. The ADA escalated its language from prior similar

legislation to include mandatory, rather than hortatory, language as well as extending the definition of discrimination to include inappropriate segregation itself, and specifically noted that institutionalization is an area of persistent discrimination. Additionally, the regulations promulgated by the Department of Justice clearly indicate that integration is a requirement of the ADA in its mandate to eliminate discrimination against people with disabilities. Essentially, unjustified segregation, as evidenced by the facts in this case, is banned discrimination *per se* due to the language of the statute and its regulations.

Second, the Court argued there is a similarly situated group receiving preferential treatment: people with physical disabilities. While people with mental health related disabilities are essentially being required to receive treatment in an institution, people with physical disabilities are often able to receive treatment in the community. The Court noted this difference in treatment is particularly troubling in light of how comprehensively living in an institution reduces one's ability to participate in social relationships, professional development, and community life more generally.

Third, in responding to the dissent's assertion that discrimination has never been shown by demonstrating differential treatment between members of the same protected class, the Court provided examples in a footnote to show "the dissent is incorrect as a matter of precedent and logic" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 598, footnote 10). For the first example, the Court cited to *O'Connor v. Consolidated Coin Caterers Corp.*, (1996) a case on age discrimination which held that employees over forty years old are protected, even if the person who was favored over them is also over forty, provided the plaintiff was discriminated against based on age. The Court also noted the case of *Jefferies v. Harris County Community Action Assn.* (1980) which held that

discrimination against black females can be proven even against the context of no discrimination against black men or white women.

In the final point for this section of the Court's opinion, the Court unequivocally stated that nothing in the ADA, its regulations, or this opinion "condones termination of institutional settings for persons unable to handle or benefit from community settings… the State generally may rely on the reasonable assessments of its own professionals in determining whether an individual 'meets the essential eligibility requirements' for habilitation in a community-based program" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 601-602). Additionally, the Court stressed that there is no federal requirement that people with disabilities who do not want to be in the community must be placed in community-based treatment programs. The emphasis is on prohibition of discrimination via unjustified segregation, not closing every state psychiatric hospital and moving every person with a mental health disability into the community.

In Part III-B, Justice Ginsburg addressed the affirmative defense of fundamental alterations, and was joined by Justices O'Connor, Souter, and Breyer. This is the only portion of the opinion that substantively differs from the lower courts' holdings in this case, but it does not have the full weight of an official Court opinion with five Supreme Court Justice votes. Justice Ginsburg argued that the test put forth by the Court of Appeals advocating balancing the treatment cost of only the plaintiff(s) against the State's mental health budget "would leave the State virtually defenseless," as the cost for even several people would almost never be unreasonable in light of the entire State budget for mental health services (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 603).

Alternatively, Justice Ginsburg submitted that the fundamental-alteration test should permit a State to successfully defend on the grounds that the State's obligation to care for a large and diverse population of people with mental disabilities would be inequitably administered, were they required to provide immediate relocation for the plaintiffs. Essentially, Justice Ginsburg is allowing states to acknowledge the full picture of their mental health treatment system when arguing they are being faced with a fundamental alteration to the way their mental health treatment system functions. She noted that while the District Court was correct in surmising that the State had lower cost per client when providing treatment in a community-based program as compared to treatment in an institution, such a "simple comparison … overlooks costs the State cannot avoid… [such as] increased overall expenses by funding community placements without being able to take advantage of the savings associated with the closure of institutions" (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 604).

Here again, Justice Ginsburg insisted that the ADA does not require States to close all institutions and "plac[e] patients in need of close care at risk," nor does it require States to discharge consumers to any other setting, such as homeless shelters (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 604). One method of showing a state is "maintain[ing] a range of facilities and… administer[ing] services with an even hand" is to develop and implement a plan for moving willing individuals clinically determined to be appropriate candidates for community placement into less restrictive situations (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 605). Having a waiting list for these community placements was not prohibited, provided the waiting list moved at a reasonable pace and was not influenced by a motivation to keep all institutional beds full.

Concurrences

Justice Stevens concurred in substantial part and in the judgment, but ultimately withheld his vote from Part III-B. While he agreed there was discrimination in the case, he cited concerns over appropriate reviewing procedure by the Court regarding the State's defense. Justice Stevens argued that since the appeals court had remanded the case to the District Court for consideration of the State's "fundamental alteration" defense, and the District Court's subsequent decision was pending before the appeals court, if the Court wanted to correct the application of the defense, the proper method would have been to take the later iteration of the case on appeal.

Justice Kennedy wrote a two-part concurring opinion, and Justice Breyer joined him in the first part. He began by noting that despite remarkable advances in treatment science and advocacy by professionals, people with severe mental illness continue to be treated at inadequate rates, at least partially due to historic mistreatment and lack of consistent public resources. He briefly noted that while deinstitutionalization was executed with "benign objectives," and was beneficial for many people, it was also "a psychiatric *Titanic*" for many others (*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 608-609, quoting Torrey, 1997, p. 11). He unequivocally stated the ADA should not continue the mistakes of deinstitutionalization:

> "It would be unreasonable, it would be a tragic event, then, were the Americans with Disabilities Act of 1990 (ADA) to be interpreted so that States had some incentive, for fear of litigation, to drive those in need of medical care and treatment out of appropriate care and into settings with too little assistance and supervision. The opinion of a responsible treating physician in determining the appropriate conditions for treatment ought to be given the greatest of deference… States may be pressured into attempting compliance on the cheap, placing

> marginal patients into integrated settings devoid of the services and attention necessary for their condition."

(*Olmstead v. L.C. ex rel. Zimring*, 1999, p. 610). He acknowledged Justices Ginsburg's careful treatment of this issue in the opinion of the Court and exhorted lower courts to be judicious in their application of this decision.

In Part II, he explained why he did not join the majority opinion. He did not interpret the ADA to define unjustified segregation as discrimination *per se but* did endorse the possibility that the plaintiffs may be able to show discrimination via preferential treatment of a similarly situation group – people with physical disabilities. He recommended the Court remand the case to the District Court in order for there to be a factual inquiry if there was differential treatment between the two groups, and thereby, discrimination.

Dissent

The dissent was written by Justice Thomas and joined by Chief Justice Rehnquist and Justice Scalia. The dissent argued there was no discrimination in this case. Using the dictionary definition of discrimination, Justice Thomas contended there was no evidence of differential treatment between people with disabilities and people without disabilities. They rejected the majority's contention that Congress intended to broaden the definition of discrimination to include unjustified segregation by noting the differences in language between the definitions section of Title I and Title II. Specifically, as noted in the earlier subsection on the ADA in this dissertation, Title I has language instructing that "discrimination" should be construed to include unjustified segregation, among other things. Meanwhile, Title II does not have a section on

construction. The dissent averred this distinction means that Congress did not intend for discrimination to be construed as broadly in Title II as in Title I; instead, Congress intended discrimination to have its plain meaning when applied in Title II.

Additionally, the dissent looked to prior Supreme Court cases interpreting comparable sections of Title VII of the Civil Rights Act and § 504 of the Rehabilitation Act to support their contention that discrimination could only be shown by identifying a similarly situated group given preferential treatment. The dissent also cited concerns about federal overreach into state organization of mental health systems and states being repeatedly sued for not immediately providing each individual with a disability with the treatment they desire. The dissent does not address the role of the Department of Justice regulations in interpreting Title II of the ADA. As discussed in more depth above, the majority answered these contentions by citing case law where discrimination was noted between members of the same protected class, using the Department of Justice regulations for guidance in interpreting the ADA, and relying upon the strongly worded findings section to decipher Congressional intent for the ADA's application.

Overall, the *Olmstead* decision was a milestone in disability law, particularly for people with developmental disabilities and mental health concerns. *Olmstead* continues to reverberate in federal and state policies shaping mental health treatment systems. Its ultimate mandate is that states must provide community-based treatment programs to people who are clinically determined to be appropriate for that level of services and who desire to receive treatment in the community, provided that provision of such treatment does not require the State to fundamentally alter the way they provide services. Its final

legacy will be determined by the effectiveness with which states modify their mental health systems in response to its mandate.

CHAPTER 5: *OLMSTEAD* RULINGS IN THE U.S. CIRCUIT & DISTRICT COURTS

After *Olmstead* was decided in 1999, several states proactively took action to develop what became known as *Olmstead* plans. By 2004, twenty-nine states, including Georgia, had developed *Olmstead* plans (Rosenbaum & Teitelbaum, 2004). As U.S. Supreme Court decisions tend to do, the Court left open several important questions about precise implementation in its decision, including how to define "a reasonable pace" and exactly what outcomes indicate a State has an effective plan. Naming a plan "*Olmstead"* does not ensure its compliance with the Court's ambiguous requirements, leaving even well-intentioned states unsure if their plans were sufficient. Predictably, lawsuits ensued. Initially, those lawsuits were typically filed by advocacy agencies or classes of plaintiffs. In 2009, the Civil Rights Division of the U.S. Department of Justice started aggressively enforcing *Olmstead* by suing states with inadequate plans (USDOJ Civil Rights Division, 2011). This chapter will review the different approaches taken by courts across the country to apply *Olmstead's* vague requirements to state performance.

The subjects of *Olmstead* plans vary widely, as the ADA defined discrimination very broadly. State policies may include considerations for people with physical disabilities, people with developmental disabilities, and people with disabling mental illness, or any combination thereof. Subsequently, many *Olmstead* plans are highly diverse in their efforts to incorporate people with disabilities into the community.

Reviewing all *Olmstead*-related litigation for all policies for all people with disabilities is beyond the scope of this dissertation. Rather, this chapter, and this dissertation overall, focuses on *Olmstead* policies related to people with SMI, for two primary reasons. First, that is the area of study of the author. Second, as is argued in the first and second chapters of this dissertation, people with SMI are often abandoned in major policy shifts for easier-to-treat populations, as was seen in deinstitutionalization, and they often do not have much political capital with which to protect themselves. Therefore, this chapter's review of litigation subsequent to the *Olmstead* decision is limited to cases applicable to people with SMI, specifically in their search for access to treatment services in the community to avoid unjustifiable segregation.

First, this chapter will review the only two federal appellate circuits to articulate the qualities of an "effective *Olmstead* plan" in the context of moving people from institutions into the community. Next, relevant district court decisions from other circuits will also be examined. Finally, relevant Department of Justice lawsuits, particularly the terms of their settlement agreements (i.e., consent decrees), will be discussed. As the United States Supreme Court has not revisited *Olmstead* or further clarified its requirements in this regard, looking to the style of enforcement by the courts will provide instructional sets of evaluative criteria, which will be examined in the empirical section of this dissertation.

Appellate Court Decisions

While many courts around the country have sought to interpret several of the legal grey areas surrounding the *Olmstead* decision and the ADA, only the Third Circuit and

the Ninth Circuit have evaluated state plans for "continuing deinstitutionalization," and they came to markedly different conclusions.

Third Circuit

The Third Circuit includes the states of New Jersey, Delaware, and Pennsylvania. The relevant case that was ultimately decided by the appellate court began in 2001 and arose initially from the situation of four adult plaintiffs: Frederick L., Nina S., Kevin C., and Steven F. (*Frederick L. v. Dept. of Public Welfare,* 2001). These four plaintiffs were hospitalized at Norristown State Hospital (NSH) in Pennsylvania. One plaintiff, Frederick, had been recommended for discharge from the state hospital in July 1997, while another, Kevin, had been recommended for discharge in February 1999. Steven had also been recommended for discharge, but the date is not noted in the court's opinions. Nina had not yet received any such recommendations, but the court seems to attribute this to the observed tendency of NSH professionals to be unaware of services available in the community (*Frederick L. v. Dept. of Public Welfare,* 2001, p. 514). Furthermore, the court noted that potential discharges from NSH are only evaluated for community readiness "based on the capacity of the individual to fit – however awkwardly – into existing programs," as opposed to considering their community readiness had more comprehensive and inclusive community services been available (*Frederick L. v. Dept. of Public Welfare,* 2001, p. 514).

The lawsuit overall survived a motion to dismiss, but not without a few casualties; some counts were barred by the Eleventh Amendment, but some ADA and all Rehabilitation Act claims were able to proceed (*Frederick L. v. Dept. of Public Welfare,*

2001). Over the next four years, the case was decided by the district court, then appealed, vacated, and remanded, decided by the district court again, and then appealed, vacated, and remanded yet again (*Frederick L. v. Dept. of Public Welfare,* 2005). Both district court decisions found in favor of the defendants, holding they had established the affirmative fundamental alteration defense described by the Court in *Olmstead* (*Frederick L. v. Dept. of Public Welfare,* 2002; *Frederick L. v. Dept. of Public Welfare,* 2004b).

The first district court decision included recitation of several relevant facts. First, the class of plaintiffs had grown from four individuals to three hundred members (*Frederick L. v. Dept. of Public Welfare,* 2002). All individuals hospitalized at NSH for non-forensic reasons were included as members of the plaintiff class. This group of individuals is observed to be most commonly diagnosed with schizophrenia (52%), followed by schizoaffective disorder (30%). Members of the plaintiff class tended to fall into one of two categories: about one-third of individuals are hospitalized for a short term (less than two years) and about two-thirds are at NSH for a long term (more than two years), with the average length of stay being ten months and 12.5 years, respectively. The court noted, "defendants admit that at any given time, NSH treatment professionals consider approximately one third of NSH's civil patients clinically stable and ready for discharge" (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 591). At the time of initial trial, that would have included approximately one hundred members of the plaintiff class.

The court also made several important observations about the structure of funding for mental health services in Pennsylvania (*Frederick L. v. Dept. of Public Welfare,* 2002). The Department of Public Welfare (DPW), as part of the executive branch, develops and proposes an annual budget, which is submitted to the legislature for

approval or modification. DPW then receives back funds that are explicitly earmarked for particular programs within the budget, with no discretionary funds or authority to modify funding allocations. Under state law, individual counties are responsible for developing community mental health services. The county sends needs assessments and annual budgets to DPW for funding. Overall, DPW and its annual legislatively approved budget account for approximately eighty percent of the costs for state psychiatric hospitals and ninety percent of the costs for the county community mental health services.

Additionally, discharge procedures at NSH are described by the court as somewhat haphazard. NSH declined to develop and manage a waiting list of individuals ready for discharge, ostensibly because "discharge planning is an individualized process" and discharge readiness may change while waiting for placement (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 586). The length of waiting time for a community placement is seen as highly variable, due to rare vacancies in community programs and unpredictable acceptance rates by community providers. There is no evidence presented by the defense that there exists a comprehensive plan for efficient movement of discharge-ready individuals into less restrictive settings; in fact, the court noted that a defense witness explicitly admitted there was no such plan at trial (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 587).

As the court began its *Olmstead* analysis, it is undisputed that the allegation of discrimination under the ADA and the Rehabilitation Act via unjustified segregation is valid; the only real question is whether the changes to the system to reduce this discrimination would be reasonable modifications or a fundamental alteration of the

state's mental health programs (*Frederick L. v. Dept. of Public Welfare*, 2002). The plaintiffs requested the defendants be required to develop at least sixty community placements per year, with an estimated cost of approximately $6.7 million per year. The court acknowledged that while community-based services are less expensive than hospitalizations, oftentimes, states face the cost of developing community-based services while maintaining hospitals, creating a substantial financial burden. The court additionally recognized that states have a floor effect on how much money they can save by increasing discharges from the state hospital, as the state hospital must remain open, and so has fixed costs.

The court described the plurality decision by the *Olmstead* Court on the fundamental alteration defense as explicitly rejecting both a simple comparison of the cost of the plaintiffs' integration to the whole of the state's mental health budget (which would result in the plaintiffs winning almost every time), as well as rejecting a finding that any increase in costs "constitutes a fundamental alteration *per se*" (which would result in the state winning almost every time) (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 592). Rather, the fundamental alteration defense requires a more moderate analysis: if the requested accommodation is reasonable, while "taking into account the resources available to the State and the needs of others with mental disabilities" (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 592, quoting *Olmstead v. L.C. ex rel. Zimring*, 1999, p. 603). The court clarified that "resources available to the State" means only the state's allocated mental health budget.

Within this analytical context, the court finds for the defendants. The analysis seems to be driven by two factors: DPW's established track record of increasingly

developing community placements over time and the inadequacy of the financial resources allotted to DPW. The court showed deference to DPW and its consistent efforts "to establish more and more community-based programs… to the extent possible, given fiscal realities" (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 593). However, the court only noted the financial limitations DPW was restrained to work within, and did not comment or criticize further, as the mental health budget of the state was approved by the legislature, and not subject to judicial review.

Essentially, the court seemed resigned that DPW had an insufficient budget but had a record of making the best of a bad situation, which assured the court DPW would continue to do so in the future. As the court could only review DPW's decisions on how to use the funds appropriated for it by the legislature, not the legislature's decision on the amount of funds to be appropriated, the court concluded, "simply, absent an increase in funding, there is no way for Defendants to provide the relief sought by Plaintiffs without depriving others of mental health care" (*Frederick L. v. Dept. of Public Welfare,* 2002, p. 593). The court noted that not only are the plaintiffs discontented, but the defendants and the court are frustrated as well.

Fortunately, the plaintiffs appealed (*Frederick L. v. Dept. of Public Welfare,* 2004a). The appeal drew the appellate court's attention to three claims primarily. First, a fundamental alteration defense could not be established solely by claiming an immediate net increase in cost. Second, it was an err for the District Court to not review DPW's role in the budget development, specifically prior to the submission of the proposed budget to the legislature. Third, DPW had failed to provide anything resembling a comprehensive plan for future efficient movement of appropriate individuals into the community, instead

only claiming that as DPW had, in the past, developed community placements as proactively as they could with allotted appropriations and any budget excess, they would continue to do so in the future.

First, the court agreed with the appellants that a fundamental alteration defense could not be established solely by claiming an immediate net increase in cost; however, the court held that DPW had provided evidence that it had repeatedly and unsuccessfully attempted to procure additional funds for its community placements as well as spending any budgetary excess for that purpose. Additionally, the court rejected the appellants' argument that the majority of the cost for additional community placements would eventually be tempered by savings from hospital bed closures as the exact "reductive cost comparisons" the *Olmstead* plurality had renounced (*Frederick L. v. Dept. of Public Welfare*, 2004a, p. 497). The Third Circuit also agreed with the District Court that the legislative process by which annual budgets are set is beyond judicial scrutiny. Overall, in response to the contention that DPW should have managed its funds other than it did, the Third Circuit described the requested cost shifting as exactly the type deemed to be a fundamental alteration by the *Olmstead* plurality – that which would require the state to unfairly and inequitably administer services, ultimately at the expense of non-plaintiff service recipients.

Finally, the order to vacate and remand the case rested only on the final contention by the appellants: DPW had not done enough in providing a plan for the future to sustain a fundamental alteration defense. The Third Circuit agreed with the District Court that Pennsylvania could be given credit for its progress in deinstitutionalization since the 1950s; however, the Third Circuit further required "a commitment to action in a

manner for which it can be held accountable by the courts" in the future (*Frederick L. v. Dept. of Public Welfare,* 2004a, p. 500).

The District Court, on remand, reviewed the planning practices of DPW to determine their sufficiency for a fundamental alteration defense (*Frederick L. v. Dept. of Public Welfare,* 2004b). The guidance provided by the Third Circuit was relatively vague, requiring primarily the ability to hold the state accountable with only three additional concrete parameters: 1) a piece of paper was not required to have a plan, 2) NSH's current practices of monthly reviews of hospitalized individuals was insufficient, and 3) ordering DPW to develop sixty community-based residential slots each year was too extreme a requirement (*Frederick L. v. Dept. of Public Welfare,* 2004b, p. 5). Plaintiffs contended that nothing less than a "'concrete plan' with 'measurable outcomes' and a 'timeline for the discharge of unnecessarily institutionalized class members'" would suffice (*Frederick L. v. Dept. of Public Welfare,* 2004b, p. 7). However, the court explicitly rejected this argument, noting that if such specific parameters were required, the Third Circuit could have easily expressed that.

Instead, the court focused on the state's general planning efforts. Essentially, the court found that since February 2000, the state had been developing comprehensive plans based on formal needs assessments, organized by the geographic service areas of the nine state psychiatric hospitals. The plans had clearly articulated goals of developing more community services and reducing reliance on the state psychiatric hospitals as primary providers of mental health care services in the state. The court also noted the development of county level planning initiatives, and an overall trend of deinstitutionalization in the state in recent years, including over half of the plaintiffs in

the original lawsuit. Overall, DPW's plan for the future was declared to be sufficient for a fundamental alteration defense, given that it was "comprehensive, holistic, and forward-looking… [offering] a full range of mental health services, with an emphasis on not only discharging current hospitalized patients, but also seeking to avoid hospitalization… demonstrat[ing] DPW's central and long-term commitment that all reasonable steps will be taken to continue the past progress" (*Frederick L. v. Dept. of Public Welfare,* 2004b, p. 7).

Turns out, the Third Circuit actually agreed with the plaintiffs, criticizing DPW's approach as "a vague assurance of the individual patient's future deinstitutionalization rather than some measurable goals for community integration for which DPW may be held accountable" (*Frederick L. v. Dept. of Public Welfare,* 2005, p. 156). The Third Circuit was particularly disparaging of DPW's failure to turn the plans for the nine service areas into a state-wide plan, and the final plans including "amorphous, *i.e.,* non-specific goal of closing *up to* 250" hospital beds per year (*Frederick L. v. Dept. of Public Welfare,* 2005, p. 158). In perhaps the most scathing sentences of the opinion, the court wrote,

> DPW remains silent as to when, if ever, eligible patients at NSH can expect to be discharged. Instead, DPW proffers general assurances and good faith intentions to effectuate deinstitutionalization. General assurances and good-faith intentions neither meet the federal laws nor a patient's expectations. Their implementation may change with each administration… they are simply insufficient guarantors in light of the hardship inflicted upon patients through unnecessary and indefinite institutionalization.

(*Frederick L. v. Dept. of Public Welfare,* 2005, p. 158).

Ultimately, the Third Circuit held that states must have written plans with specific and measurable goals of fewer state psychiatric hospital beds by particular dates. The

court seemed to view brightline markers, such as lower bed numbers by certain dates, as crucial elements of accountability. While the Third Circuit respected Pennsylvania's "strong commitment in the past to deinstitutionalization," as it had decreased the hospital population from 40,000 to 3,000 in the fifty years preceding, the court clearly articulated concerns about that trend continuing in the face of changing leadership without clearly articulated expectations (*Frederick L. v. Dept. of Public Welfare,* 2005, p. 156). Rather, a specific date of discharge for an approximate number of people, along with discharge eligibility requirements and "a general description of the collaboration required between the local authorities and the housing, transportation, care, and education agencies to effectuate integration into the community" was necessary for a state's fundamental alteration defense (*Frederick L. v. Dept. of Public Welfare,* 2005, p. 160).[9]

Ninth Circuit

The Ninth Circuit includes the states of Alaska, Hawaii, Washington, Oregon, California, Nevada, Montana, Idaho, and Arizona. Both Washington and California have

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9 The Third Circuit also decided a remarkably similar case in 2005, a few months before issuing their second opinion on *Frederick L* (*Pennsylvania Protection and Advocacy, Inc. v. Pennsylvania Department of Public Welfare,* 2005). A nursing home that served almost exclusively the elderly population discharged from the state psychiatric hospitals was challenged as violating the ADA's integration mandate after staff reported to DPW that "80% of its residents 'could function in the community now if the necessary community support services were in place and operational' and that none of its residents were precluded from leaving 'due to serious medical problems that cannot be met in the community'" (*Pennsylvania Protection and Advocacy, Inc. v. Pennsylvania Department of Public Welfare,* 2005, p. 378). The appellate court's opinion in that case is effectively an encore to their first opinion on *Frederick L.*; DPW failed "to demonstrate a reviewable commitment to action… and thus DPW's fundamental alteration defense must fail" (*Pennsylvania Protection and Advocacy, Inc. v. Pennsylvania Department of Public Welfare,* 2005, p. 383).

had cases reviewed by the Ninth Circuit to evaluate the sufficiency of the state plan in establishing a fundamental alteration defense by proactively reducing the unjustifiable segregation of people with disabilities (*Sanchez v. Johnson,* 2005; *Arc of Washington State, Inc. v. Braddock,* 2005).[10] In both cases, the challenges were related to the administration of Medicaid waiver program to aid states in providing services in the community. Specifically, in both cases, plaintiffs contended that the waiver program was insufficient because the state should have requested additional waivers from Medicaid, as there were eligible individuals unable to move from the institutions into the community due to lack of program slots.

In both cases, the Ninth Circuit found that due to the state's enthusiastic use of the existing program along with other proactive endeavors to protect and grow the outpatient services options, even in the face of budget cuts for other programs, provided a sufficient basis for a fundamental alteration defense. Unlike the Third Circuit, the Ninth Circuit does not require written plans or specific discharge dates for approximate groups of people but does require more than just lower hospital populations (*Sanchez v. Johnson,* 2005; *Arc of Washington State, Inc. v. Braddock,* 2005). The Ninth Circuit requires

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[10] Both cases had as plaintiffs people with developmental disabilities or private organizations that served only people with developmental disabilities, or both. The programs being challenged were directed by an administrative arm of the state executive branch dedicated to providing services only to people with developmental disabilities. However, the court made no distinction in its analysis specific to the type of disability of the plaintiffs, indicating they would likely use the same approach to evaluate a similar lawsuit involving people with SMI, meaning this decision is also shaping *Olmstead* policy for people with SMI indirectly. As will be seen throughout this chapter, there is relatively little litigation directly dealing with the original *Olmstead* issue – the responsibility of the state to create and maintain a comprehensive plan that effectively moves individuals with SMI who are determined to be ready for discharge by themselves and their treatment team into the community – so, states and researchers must take their cues from any relevant and applicable decisions.

significant budget increases in community services and community-based waiver programs, despite fiscal constraints.

In California, the Ninth Circuit seemed particularly impressed that "California ha[d] a successful record of personalized evaluations leading to a reasonable rate of deinstitutionalization" coupled with strong support of community-based treatment programs (*Sanchez v. Johnson,* 2005, p. 1068). In particular, the appellate court applauded California's database of people currently institutionalized and the services they would likely need to be successful in the community, along with the individualized plans to connect the person to those resources in the community and develop the skills in the person. Perhaps most convincingly, the Ninth Circuit found that California had increased funding for community-based treatment services, including the waiver program, and concomitantly decreased its hospital population over the past several years.

Similarly, when Washington's *Olmstead* plan was challenged, it also survived primarily because of the state's focus on funding community treatment alternatives (*Arc of Washington State, Inc. v. Braddock,* 2005). While many state agencies had their funding decreased in the 1990s, Washington more than doubled its investment in community-based treatment programs for people with disabilities during that same time. Washington concurrently increased the available slots in its waiver program and decreased its institutional population.

The Ninth Circuit explicitly stated that an expansion to a state's administration of a Medicaid waiver program was not a *per se* fundamental alteration, and could, in unspecified circumstances, be a reasonable modification. However, the court emphasized that it would not "tinker with" a state's "comprehensive, effectively working plan"

especially if its opportunities for community treatment are continually increasing both in budget and real number of program slots, it consistently uses all available community treatment opportunities, and it shows evidence of a continuing trend of deinstitutionalization (*Arc of Washington State, Inc. v. Braddock,* 2005, p. 621, quoting *Olmstead v. L.C. ex rel. Zimring,* 1999, p. 605). The court described as unnecessary a hypothetical statewide plan that provided for immediate community placement as soon as an individual became eligible, citing back to *Olmstead*'s acceptable of a reasonable waiting list (*Sanchez v. Johnson*, 2005, p. 1068, quoting *Olmstead v. L.C. ex rel. Zimring*, 1999, p. 606).

District Court Decisions

There is relatively little litigation directly dealing with the original *Olmstead* issue – the responsibility of the state to create and maintain a comprehensive plan that effectively moves individuals with SMI into the community once they are determined to be ready for discharge by themselves and their treatment team. The most pertinent cases arose in Florida, Minnesota, and Maryland. However, there are several additional cases which, even if addressing slightly different issues, contribute meaningfully to our understanding of how courts are approaching the application of Olmstead to people with SMI as they try to integrate into the community following hospitalization.

Fourth Circuit

The Fourth Circuit includes the states of Maryland, North Carolina, South Carolina, Virginia, and West Virginia. Twelve plaintiffs, all diagnosed with a traumatic

brain injury or developmental disability, filed suit against a state hospital in Maryland, alleging they could receive appropriate care in the community and the state's failure to provide such placements for them violated the ADA *inter alia* (*Williams v. Wasserman,* 2001). Several of the plaintiffs waited for months for a community placement after their treatment team labelled them ready for a less restrictive service setting. Several plaintiffs had also gone back and forth between community and institutional placements, as the intensity of their clinical needs changed over time. The District Court ultimately held there were distinct periods of unjustifiable segregated in violation of the ADA, but the state successfully mounted a fundamental alteration defense.

In coming to its conclusion, the court relied heavily on the state's history of deinstitutionalization. Specifically, the court noted the state has gradually closed several institutions over the past ten years while concurrently expanding community programs, including both residential programs, such as group homes or staff drop-ins for private residences, and complementary day programming, such as vocational or educational programs (*Williams v. Wasserman,* 2001). The court also observed that state "mental hospitals" went from a population of 7,114 residents in 1970 to approximately 1200 in 1997, while community treatment services throughout the state increased, including the state's extensive utilization of Medicaid "waiver" programs (*Williams v. Wasserman,* 2001, p. 634). The court applauded the state for also having used savings from hospital closings to grow community programs while prioritizing those community programs over institutional programs anytime a budget shortage loomed.

Interestingly, the court quoted the *Olmstead* acknowledgement of the dynamic nature of many individual's clinical needs: "Some individuals 'may need institutional

care from time to time to stabilize acute psychiatric symptoms' … the ADA is not reasonably read to compel a State to put patients at risk by closing its institutions or to drive a State to move institutionalized patients into 'inappropriate' settings" (*Williams v. Wasserman,* 2001, p. 636-637, quoting *Olmstead v. L.C. ex rel. Zimring,* 1999, p. 605). For Maryland, testimony from an administrator in the Department of Health and Mental Hygiene approximated the needed number of on-going hospital beds to be between 1100 and 1200 - very close to the overall available beds in Maryland at the time of litigation. The court noted that the plaintiffs themselves have periodically benefitted from rehospitalizations as their needs have fluctuated.

Overall, Maryland successfully defended on fundamental alteration grounds due to its historical trend of deinstitutionalization down to the limit advised by the chief administrator of the state mental health system, combined with an observed focus on developing diverse community placement opportunities, even at the potential expense of institutional programs (*Williams v. Wasserman,* 2001). This approach seems quite consistent with the approach espoused by the Ninth Circuit, with its emphasis on a trend of deinstitutionalization coupled with the distinct development of varied community placement opportunities.

Eighth Circuit

The Eighth Circuit includes the states of Nebraska, Iowa, Arkansas, Minnesota, Missouri, North Dakota, and South Dakota. In 2009, a group of individuals with developmental disabilities sued the state of Minnesota for inappropriate use of restraint and seclusion (*Jensen v. Minnesota Dept. of Human Services,* 2015). In 2011, the parties

jointly submitted a settlement agreement, which was accepted by the court, with the condition of the court's temporarily continued supervision to ensure initial compliance with the terms of the agreement (*Jensen v. Minnesota Dept. of Human Services,* 2011). The settlement agreement terms included all people with disabilities, stretching beyond the original plaintiff group.

While generally, the terms of a settlement agreement are primarily determined by the parties, the court's involvement elevates the agreement beyond the status of a voluntary contract to a judgment of the court; it "places the power and prestige of the court behind the compromise struck by the parties" (*Williams v. Vukovich*, 1983, p. 920). The Minnesota court in this case took that charge seriously and reviewed the terms of the settlement agreement meticulously.

One of the settlement agreement terms was "System Wide Improvements" - specifically, the development of "a comprehensive *Olmstead* Plan to improve the lives of individuals with disabilities" (*Jensen v. Minnesota Dept. of Human Services,* 2015, p. 1070). The court demanded that within eighteen months, Minnesota not only develop but implement this plan, which must use "measurable goals to increase the number of people with disabilities receiving services that best meet their individual needs and in the 'Most Integrated Setting,'" in accordance with the *Olmstead* decision (*Jensen v. Minnesota Dept. of Human Services,* 2015, p. 1070). More than three years after the settlement agreement was accepted, and after rejecting four prior versions, the court finally found Minnesota's proposed plan to be sufficient on September 29, 2015 (*Jensen v. Minnesota Dept. of Human Services,* 2015).

The court cited three specific attributes as imperative to the plan's acceptability. First, the revised plan had "concrete, measurable goals with corresponding time lines" in contrast to the "vague assurances of future integrated options" previously offered by the state (*Jensen v. Minnesota Dept. of Human Services,* 2015, p. 1072). The goals include baseline data with annual improvement targets for multiple domains. Additionally, missing data for relevant goals were explicitly identified for future collection.

Second, the goals of the revised plan were pertinent to the *Olmstead* mission with "specific and realistic strategies for achieving each goal," and clearly indicated which agencies were responsible for each goal (*Jensen v. Minnesota Dept. of Human Services,* 2015, p. 1073). Finally, the revised plan also included an annual review and formal amendment process to ensure the plan was a "dynamic roadmap" that could be responsive to newly identified needs while committing to reaching the pre-identified goals (*Jensen v. Minnesota Dept. of Human Services,* 2015, p. 1073). Interestingly, in the last paragraph of the discussion, the court explicitly directs the state, with unambiguous language, to treat these commitments as "a top priority… The Court wishes to *strongly emphasize* that the State *must* prioritize its allocation of funding to meet and achieve the *Olmstead* Plan's goals. The State *may not rely on the excuse* of insufficient funding to avoid following through on the important commitments it has made" (*Jensen v. Minnesota Dept. of Human Services,* 2015, p. 1074, emphasis added).

A review of the document submitted by the state of Minnesota to the court in 2015 reveals a number of service areas, each given a set of measurable goals, with baseline data and annual improvement targets, realistic and specific strategies for proposed improvements, and clearly identified agencies responsible for the changes

(Minnesota Olmstead Subcabinet, 2015). Service areas include person-centered planning, transition services, housing services, employment, lifelong learning and education, waiting lists, transportation, healthcare and healthy living, positive supports, crisis services, and community engagement. Each service area has a section on defining the services and needs of people with disabilities, a vision statement, the current situation in that area, and specific, measurable goals by annual improvement rate with exact baseline data.

The plan that finally survived the scrutiny of the District Court seems to be a combination of the approaches used by the Ninth and Third Circuit. Similar to the Third Circuit, the court requires more than vague assurances of good faith, but specific goals to which the state can be held accountable. However, unlike the Third Circuit, the court seem unfazed at commandeering the state's annual budget development by demanding compliance with its obligations under the settlement agreement. Similar to the Ninth Circuit, the court emphasized the concurrent development of community resources rather than only lower numbers in the state hospital census. Ultimately, the court enforced a far more comprehensive and intricate standard for a plan than has been seen in other courts.

Eleventh Circuit

The Eleventh Circuit includes the states of Alabama, Florida, Georgia. In Florida, a class of currently or formerly hospitalized individuals brought suit against a state psychiatric hospital, G. Pierce Wood Memorial Hospital (GPW) alleging violations of the US Constitution, the ADA, and the Civil Rights of Institutionalized Persons Act (CRIPA; *Johnson v. Murphy,* 2001). The majority of the approximately 350 individuals

hospitalized at GPW were adults with SMI; 85% were civilly committed. Every month, GPW has approximately thirty people admitted and thirty people discharged. After a month-long trial, the District Court found in favor of the defendants on all allegations. In regard to the ADA claims specifically, the District Court held the plaintiffs did not prove that GPW violated the ADA by failing to place clients in the most integrated setting appropriate, given their clinical needs.

In coming to this conclusion, the court seemed to focus on several GPW policies and facts related to planning and performance of patient discharge (*Johnson v. Murphy*, 2001). First, the court found GPW's preparation for patient discharge to begin at admission and proceed satisfactorily until actual discharge. Upon admittance at GPW, both treatment and discharge planning began immediately, were updated regularly based on individual changes, and involved communication with people in the community who would support the individual upon discharge, including community case workers, family, and community mental health providers. There are usually few people awaiting discharge from GPW, with an average wait time of thirty to sixty days (*Johnson v. Murphy*, 2001, p. 9).

Second, the court found the options for community placement to be sufficient in terms of both being geared towards a diverse array of patient needs and being reasonably successful at meeting those needs. Once treatment providers believe an individual may be ready for community placement, there are a variety of community placement options available, including assisted living facilities and private apartments, of which "few, if any, of them operate at full capacity" (*Johnson v. Murphy*, 2001, p. 9). Community case managers are heavily relied upon to help connect recently discharged individuals to local

services. Additionally, GPW has a community outreach program "based on" an Assertive Community Treatment Team model through which GPW strives to support people as they are discharged (*Johnson v. Murphy*, 2001, p. 8). The majority of those discharged from GPW go to family homes or private apartments, with about 20% going into group living situations, such as assisted-living facilities. After discharge, most people are able to remain in the community.

In this case, unlike the cases from the Ninth, Fourth, and Third Circuits, the court did not find evidence of discrimination via unjustified segregation. The average wait time for discharge after determination of eligibility in this case was thirty to sixty days, in stark contrast to the multiple years waited for discharge in the *Olmstead and Frederick L.* cases. Therefore, there was no need for the state to try to defend on the grounds that the requested accommodations were unreasonable as a fundamental alteration of the state's mental health system.

Other Developments in the District and Appellate Courts

There are several cases, at both the district court and appellate court levels, that outline a few cornerstone principles for how courts are approaching the application of *Olmstead*. First, in agreement with similar holdings described earlier in this chapter, it seems universally accepted that vague financial concerns are not sufficient to support a state's fundamental alteration defense. In *Makin v. Hawaii* (1999), a class of people with developmental disabilities sued the state for ADA violations, *inter alia*, alleging the state had not provided sufficient community placements, as evidenced by their extended tenure on a stagnant waiting list. The state contended that providing the requested increase in

community placements could only be accomplished through the creation of an "unlimited" state fund for community mental health services. The district court was not persuaded by the state's argument, holding that a vaguely-defined potential funding problem was not adequate to protect the state against ADA violations. Additionally, in *Fisher v. Oklahoma Health Care Authority* (2003), the Tenth Circuit declared that allowing any alteration of services requiring the state to shift or increase funding to qualify as a fundamental alteration would effectively eviscerate the integration mandate of the ADA.

Second, while appellate courts have held that the ADA does not require states to develop new programs for people with disabilities (*Rodriguez v. City of New York,* 1999), the Ninth Circuit held that requiring the extension of a current program to a new, more integrated location was not the creation of an entirely new program (*Townsend v. Quasim,* 2003). The court indicated that allowing merely the location of service provision to dictate whether the program in question was new would render the integration mandate meaningless as more integrated settings tend to be in different locations, almost by definition.

Third, the protections of *Olmstead* are not limited to those currently institutionalized, but also apply to state policies that increase an individual's risk for institutionalization, such as capping the number of monthly prescriptions covered (*Fisher v. Oklahoma Health Care Authority,* 2003) or denying access to supportive medical devices that make independent living more achievable (*Davis v. Shah,* 2016).

Fourth, *Olmstead* cannot be applied in reverse; while it is discriminatory to hold someone able and willing to live in the community unjustifiably segregated in an

institutional setting, it is not discriminatory to discharge someone who does not want to be discharged. In Illinois (*Illinois League of Advocates for the Developmentally Disabled v. Illinois Department of Human Services,* 2015) and New Jersey (*Sciarrillo v. Christie*, 2013), two cases were decided against the plaintiffs when they sued claiming the closure of their state institution and subsequent forced discharge into the community was discrimination under the ADA. Essentially, the ADA only prohibits unjustifiable segregation, not unwanted integration, so the protections of the ADA are never triggered.

Finally, *Olmstead* simply does not apply to individuals who do not want to live in the community or whose treatment teams do not agree they are ready to move into the community, as those are individuals who are not unjustifiably segregated; therefore, the protections of the ADA are not triggered. Nothing in *Olmstead* requires states to override the clinical judgment of its treatment professionals to place an individual in an integrated setting if their treatment team is not confident the individual could be appropriately treated in that setting (*Black v. Department of Mental Health,* 2000). Similarly, if an individual objects to a transfer to a more integrated setting, the state may not justify their actions by citing *Olmstead*, as *Olmstead* was meant to protect those who want to move into the community, not force people with disabilities into alternative settings over their objection (*In re Easly,* 2001).

Department of Justice

The Department of Justice has been aggressively involved in *Olmstead* related litigation for almost a decade, resulting in multiple amicus curiae briefs, joined lawsuits,

and solo lawsuits about policies affecting people with a diverse array of disabilities.[11] Four states had settlement agreements (i.e., consent decrees) particularly relevant to the issue of people with SMI integrating into the community after hospitalization on a scale large enough to require comprehensive state mental health policy modification: Georgia, Delaware, North Carolina, and New Hampshire. The requirements of the settlement agreement for each state are reviewed here.

The Department of Justice took a relatively consistent approach to their settlement agreements, although its approach was decidedly different than the Third or Ninth Circuits, or even Minnesota's long disputed settlement agreement. The Department of Justice often required specific infrastructure and mental health system development, centering around Assertive Community Treatment (ACT) teams and crisis services, rather than a focus on census numbers in the state hospital or funding shifts. Most developments are required stepwise over time (e.g., a quarter of the total required is due every year over a four- to five-year period), but for the sake of brevity only totals are presented here. See Table 2 for a summary and below for a comprehensive discussion of the major terms of the four primary settlement agreements.

Georgia

Georgia was sued by the Department of Justice in early 2010, after an investigation in 2009. The settlement agreement was reached by October 2010 and

[11] All information in this section is from documents publicly available on *Olmstead* enforcement page of the Department of Justice website (https://www.ada.gov/olmstead/olmstead_enforcement.htm). A database of documents, including court filings, settlement agreements, and annual court reports was compiled and reviewed for trends in settlement agreement requirements to inform this section.

targeted both people with SMI and DD. The provisions in the settlement agreement pertaining to people with DD mainly required closing down the state institution within 4 years and moving all individuals to the community through creation of 1150 home and community-based waivers, along with development of family support and crisis services. The provisions in the settlement agreement pertaining to people with SMI targeted approximately 9000 individuals total, including those in the state hospitals, frequently admitted to the state hospitals or local emergency rooms, chronically homeless, or soon to be released from prisons or jails. This target population included people with SMI who also have a forensic status, provided the proper court has authorized community placement, although the settlement agreement explicitly states those who must register as sex offenders may understandably require additional time to place in the community.

Crisis Services

Georgia was required by the settlement agreement to establish a number of crisis services, including walk-in crisis centers, crisis stabilization programs, community-based psychiatric hospital beds for short-term stabilization, a crisis hotline, crisis apartments, and mobile crisis response teams. Within about 4.5 years, Georgia needed to create six physical locations for crisis walk-in psychiatric and counseling services, staffed twenty-four hours a day and seven days a week. Within about 3.5 years, Georgia needed to provide three crisis stabilization programs that provided community residential services for psychiatric stabilization and detoxification with sixteen beds each. Additionally, the state was required to fund thirty-five psychiatric beds in community hospitals for short-term psychiatric stabilization to prevent readmittance to the state hospital.

Georgia was also to develop and maintain a toll-free crisis hotline to provide information about community resources, along with eighteen crisis apartments staffed by peer specialists and paraprofessionals within 4.5 years to accommodate those who might need respite but not necessarily hospitalization or residential services. Each apartment should be sufficient to serve two individuals. Finally, Georgia was required to develop in the following 4.5 years adequate mobile crisis response teams to be able to respond to individuals experiencing a mental health crisis anywhere in the state within an hour. The crisis teams had to be operational to reach ninety-one of Georgia's one hundred fifty-nine counties within an hour and ten minutes within 2.5 years, and then incrementally expand its reach and decrease its response time over the next two years.

ACT

Georgia was required to have 22 ACT teams within approximately 2.5 years that can include a psychiatrist, nurse, psychologist, social worker, substance abuse specialist, vocational rehabilitation specialist, and peer specialist. Each team can have between seven and ten of these professionals, but the only required category is peer specialist. The team is to operate in fidelity with the Dartmouth model, be available 24/7 for crisis response to prevent hospitalization, and offer case management, assessment, psychiatric services, employment/housing assistance, family support and education, substance abuse treatment, along with crisis services. Each team is to have no more than ten clients per ACT Team member.

Case Management

Georgia needed to develop eight Community Support Teams (CSTs) within about 2.5 years to meet with individuals in their homes to connect individuals to resources in

the community to prevent hospitalization. CSTs needed to have at least three team members, including a nurse, a peer specialist, and one or two paraprofessionals, and serve no more than twenty clients per team member in rural areas and no more than thirty clients per team member in urban areas. CSTs were intended to operate in areas where there was a lack of mental health professionals or in concert with ACT services.

Georgia also needed to develop fourteen Intensive Case Management (ICM) teams within about 3.5 years. ICM teams would each have ten full-time case managers per team to connect individuals to resources in the community to prevent hospitalization through service coordination. These teams were to be supervised by a licensed mental health professional and serve no more than twenty clients per team member in rural areas and no more than thirty clients per team member in urban areas. Finally, Georgia was also to hire forty-five individual case managers within about 4.5 years to work with clients who already had services and supports in place. Each case manager was to have no more than fifty clients.

Supported Housing

Within 4.5 years, Georgia was required to have the capacity to provide supported housing opportunities to any of the approximately nine thousand people with SMI in the target population who need housing support, including an estimated 2000 individuals who were unable to qualify for other benefits (e.g., federal disability). The Department of Justice described supported housing as permanent housing with all the regular tenancy rights of rental properties but augmented by opportunities to voluntarily participate in flexible psychosocial support programs.

Half of the supported housing units were required to be "scatter-site housing": housing units in buildings where no more than twenty percent or two units, whichever is greater, are supported housing units, as opposed to grouping multiple units into one building. Of the total supported housing units, only sixty percent could be two-bedroom apartments; the remaining forty percent were required to be one-bedroom apartments. Georgia was also required to provide bridge funding to support individuals who were eligible for other benefits to fund their supported housing. The bridge funding could be used for rental deposits, household necessities, or living expenses to help the individual transition smoothly to supported housing.

Supported Employment

Georgia was required to provide supported employment services to 550 individuals within 4.5 years and do so in accordance with an evidence-based supported employment model, such as that outlined by the SAMHSA Supported Employment toolkit.

Family and Peer Supports

Within 3.5 years, Georgia was required to not only provide peer support services to individuals also receiving ACT and CST services, but to an additional 835 individuals as well.

Transition Planning

Georgia was required to hire one case manager and one transition specialist per state psychiatric hospital within 1.5 years whose sole mission was to coordinate transfers of individuals out of the state psychiatric hospital into the community. The services of these case managers and transition specialists were to be engaged particularly in cases

were the individual has a behavioral or medical history that indicated they may be more challenging than average to discharge, or if the treatment team either does not recommend discharge or cannot agree upon a discharge plan. The transition specialist was also tasked with review of the transition plan for anyone who had been in the state psychiatric hospital for more than forty-five days.

Improper Admissions

Under the settlement agreement, people cannot be transferred from the state psychiatric hospital to an assisted living facility or skilled nursing facility without informed consent or necessity due to a medical condition.

Quality Assurance

Georgia was also tasked with developing a quality assurance system within 1.5 years to conduct annual quality reviews of all community services provided in response to this Agreement. The annual quality reviews were to include in-person interviews of clients and staff, review of treatment records, review of injury or incident reports, and review of outcome data. Additionally, Georgia was to perform an annual network analysis of the system of qualified community providers developed and trained to provide the services required by the settlement agreement. This network analysis should determine the availability of services and monitor costs to inform reimbursement rates.

Delaware

Delaware was sued by the Department of Justice in early 2011, after an investigation in 2010. The settlement agreement was reached by July 2011 and targeted people with SMI, prioritizing those who were currently hospitalized, in private

institutions, had high emergency room utilization rates, criminal justice involvement, or chronic homelessness.[12] Those with SMI and forensic status were also included in the target population, with the Department of Justice going further than its stance in Georgia by stating that not only should they be included, but the state should strive to educate judges and advocate for community placement when the treatment team thinks the individual is appropriate for treatment in the community. This settlement agreement also required more development overall than the settlement agreement with Georgia, with the only exception being the crisis services network.

Crisis Services

Delaware was required by the settlement agreement to establish a number of "recovery-consistent" crisis services, including walk-in crisis centers, a short-term crisis stabilization unit, a crisis hotline, crisis apartments, and mobile crisis response teams. Within about a year, Delaware needed to add a physical location for crisis walk-in psychiatric and counseling services to its already existing crisis center, staff them both twenty-four hours a day and seven days a week, and ensure the staff were willing to take individuals brought there for services by the police. Within about a year, Delaware was required to ensure that its short-term crisis stabilization unit, where an individual could stay up to fourteen days, had intensive support service providers meeting with the individuals within twenty-four hours of admittance to begin planning for discharge back to the community. Interestingly, the settlement agreement also set goals for a reduction

[12] Chronic homelessness was defined here as one full year or at least four episodes of homelessness in the last three years.

by one-third in inpatient days in the acute inpatient unit within three years of the settlement agreement, and by half within five years.

Delaware was also to develop and maintain a toll-free crisis hotline to provide information about community resources within six months, along with four crisis apartments staffed constantly by peer specialists and with clinical mental health professionals on call within 2 years to accommodate those who might need respite for up to seven days. Finally, Delaware was required to develop, within a year, adequate mobile crisis response teams to be able to respond to individuals experiencing a mental health crisis anywhere in the state within an hour. The crisis teams could respond to a request from the police or the crisis hotline.

Community Education

The Department of Justice required the state to publicize the crisis hotline through print materials to every hospital, police department, homeless shelter, and correctional facility within six months of it becoming operational. Within a year of the new crisis walk-in center and the mobile crisis response team becoming operational, the state must train all law enforcement officers on the availability of those resources and to take people experiencing a mental health crisis to the crisis centers instead of local emergency rooms. Within a year of the execution of the settlement agreement, the state must have an education program for both judges and law enforcement officers describing services in the community for those with forensic status.

ACT

Delaware was required to have 11 ACT teams within approximately 4 years that could include a psychiatrist, nurse, psychologist, social worker, substance abuse

specialist, vocational rehabilitation specialist, and peer specialist. Each team can have between seven and ten of these professionals. The team is to operate in fidelity with the Dartmouth model, be available 24/7 for crisis response to prevent hospitalization, and offer case management, assessment, psychiatric services, employment/housing assistance, family support and education, substance abuse treatment, along with crisis services. Each team is to have no more than ten clients per ACT Team member.

Case Management

Delaware also needed to develop four Intensive Case Management (ICM) teams within about 1.5 years. ICM teams would each have ten full-time case managers per team to connect individuals to resources in the community to prevent hospitalization through service coordination. These teams were to be supervised by a master's level licensed mental health professional and serve no more than twenty clients per team member. Finally, Georgia was also to hire twenty-five individual case managers within about 4 years to work with clients who needed less support than those on intensive case management. Each case manager was to have no more than thirty-five clients, and each clinical supervisor was to have no more than fifteen case managers to supervise.

Supported Housing

Within 5 years, Delaware was required to have the capacity to provide supported housing opportunities to the whole target population, using any government benefit programs, whether state or federal. Delaware was to adjust the number of vouchers provided based on waiting lists, estimates of people with SMI who were homeless, and any individuals waiting on stable housing to be discharged from the state psychiatric hospital or any other IMD. The Department of Justice described supported housing as

permanent housing with all the regular tenancy rights of rental properties but augmented by opportunities to voluntarily participate in flexible psychosocial support programs. Individuals could not be rejected based on medical need or substance use history.

All of the supported housing units were required to be "scatter-site housing": housing units in buildings where no more than twenty percent or two units, whichever is greater, are supported housing units, as opposed to grouping multiple units into one building. The apartments could be one or two bedrooms, but no more than two people to an apartment and each much have their own bedroom. Each person must be able to select their own roommate, if they have one. Delaware was also required to provide bridge funding to support individuals who were eligible for other benefits to fund their supported housing. The bridge funding could be used for rental deposits, household necessities, or living expenses to help the individual transition smoothly to supported housing.

Supported Employment

Delaware was to provide supported employment to 1100 individuals within 4 years, not including those receiving supported employment through their ACT teams, as well as general rehabilitative services to 1100 individuals within 4 years. However, unlike Georgia, there was no mention of an evidence-based model for supported employment. Rehabilitative services were described as including educational services, treatment for substance misuse, volunteer opportunities, recreational and leisure activities, or any activity to improve functional skills in a community setting.

Family and Peer Supports

Within in 4 years, Delaware was to provide family and peer support services to 1000 individuals.

Transition Planning

Delaware was also required to develop comprehensive transition planning services for those currently in the state psychiatric hospital or any institution considered an IMD. The transition planning services were to be executed by a team, including clinical staff, peer specialists, and a community provider, and be based on the assumption the person can successfully live in the community. Transition planning was to be person-centered, with the hospitalized individual playing the primary role in planning and their ability to be self-determinant protected throughout the process. Discharge planning was to begin immediately upon admission, with the team meeting within five days of admission to identify supportive services needed to return to the community, even if those services were not currently available. The team should reassess every thirty days and be actually discharging people within thirty days of an appropriateness determination. If someone is determined to not be eligible for discharge, the specialized transition team was to be consulted, and then the court monitor, to see if a resolution could be found.

Quality Assurance

To ensure the quality of these developments, Delaware was required to take several steps. First, if someone were to transition out of an institution and experience harm, a root cause analysis must be conducted within ten days and future preventative measures implemented. Every contract with a community provider had to be performance based, with each provider being reviewed at least once every other year to

determine if they were providing the services and achieving the outcomes desired. Outcomes will be tracked by the state aggregating and analyzing several variables that community providers are required to track and report. If the state determined that overall, there is not increased integration, access to stable housing, and decreased hospitalization, then the state must assemble a team with the court monitor and a representative from the Department of Justice to address any barriers. The state must also annually publish a report documenting the number of people being served in each service category, gaps in services in the community, and a review of service quality.

North Carolina

North Carolina was sued by the Department of Justice in 2012, and a settlement agreement was reached by August 2012. While the two prior settlement agreements reviewed in this chapter were primarily targeting adults with SMI in the state psychiatric hospital, in North Carolina, the Department of Justice was focused on adults with SMI who were housed in adult care homes or other IMDs (Group 1), people with SMI who were homeless or with unstable housing (Group 2), or people with SMI who were not admitted to an adult care home as a result of this agreement (Group 2). For some services, Group 1 had a higher quota or was otherwise prioritized over Group 2. Overall, the target population was about 3000 adults with SMI who were either currently housed in an adult care home or at risk of admission to an adult care home. While the state was required to provide services to any member of the target population for which they are eligible, services under this agreement for those outside the target population were limited to funding availability.

In this settlement agreement, the structure, rate of development, and exact numbers of several services were left open, unlike in Delaware and Georgia, where there was a high degree of specificity. Conversely, this settlement agreement had increased specificity in regard to discharge planning. There were increased requirements to document any disinclination to move from the adult care home into the community. This may be due to an anticipated increase in reticence in clients and guardians for a client to leave an adult care home, as opposed to leaving the state psychiatric hospital.

Crisis Service

North Carolina was required to develop and maintain a crisis hotline, walk-in clinics, short-term community hospital beds, and mobile response teams. Unlike Georgia and Delaware, there are fewer specifics in this settlement agreement about timelines and actual number requirements. The agreement stated the state should monitor its crisis services to identify and amend any gaps.

Community Education

Similar to Delaware, printed materials in English and other common languages should be made available, along with training, to hospitals, community providers, police, homelessness service organizations, and correctional facilities to ensure public knowledge of the crisis response network.

ACT

North Carolina was required to develop fifty ACT teams that operate with fidelity to the Dartmouth model or the TMACT model within seven years.

Case Management

North Carolina was required to develop community support teams and case management services.

Supported Housing

North Carolina was required to provide at least 3000 supported housing slots within 8 years, 2750 of which must be scatter-site, with the remaining acceptable in "disability-neutral" buildings with up to sixteen units. None of these housing slots can be in any building that requires a license to operate. The Department of Justice described supported housing as permanent housing with all the regular tenancy rights of rental properties but augmented by opportunities to voluntarily participate in flexible psychosocial support programs. The settlement agreement expressed a strong preference for single-occupant housing, but roommates were permissible as long as the individual was able to choose their own roommate and remained eligible for a single occupancy housing situation as soon as one became available.

Supported Employment

Support employment services must be increased from 100 to 2500 recipients within seven years, using an evidence-based model with a fidelity measure such as the SAMHSA toolkit.

Family and Peer Supports

North Carolina was to offer peer support services as well as psychosocial rehabilitation services.

Transition Planning

Transition planning should be person-centered, with an emphasis on self-determination, and based on the assumption the individual could be successful living in

the community with the appropriate supports. For the first time among the settlement agreements reviewed in this chapter, psychiatric advance directives and crisis plans were mentioned as crucial elements of a comprehensive transition plan. Every person in an adult care home or state psychiatric hospital should have a written discharge plan that was developed by their transition team. Each transition team should have members who are familiar with local community services, experts in the treatment of people with SMI ("subject matter expertise"), linguistically and culturally competent members, and peer specialists.

An individual was to be assigned to a transition team immediately upon admission and discharge should be completed within ninety days of team assignment, provided a housing slot is available. In addition to local transition teams, there should be a state level transition team to consult on challenging cases. Overall, each hospitalized individual should have a written plan with individual strengths, preferences, goals, and needs that is reassessed at least every quarter for readiness for discharge. The plan should also document any services that would benefit the individual, even if they are not currently available, factors that led to past readmissions, necessary steps for discharge and their timeframes, and any lingering barriers to discharge; a barrier cannot be simply the existence of a disability or its severity.

Improper Admissions

The state was to also make arrangements that any person, prior to admittance to an adult care home, was screened for the presence of SMI by an independent screener, and subsequent eligibility for mental health services was determined. Based on this information, a community integration plan was to be developed, with the person in the

primary planning role, as an alternative to admission to an adult care home. This planning process should be analogous to the discharge planning process. Should the person decline to go into the community and instead express a preference for an adult care home, after being informed of the community options, the state must extensively document how the person was informed, implement strategies to alleviate any concerns or objections to proceeding with the community integration plan, and continue to monitor the person in the adult care home while providing regular transition planning services.

Client & Guardian Counseling

Transition planning should be pursued aggressively through counseling of clients and guardians on community integration options. The stated goal in the settlement agreement was to ensure all are fully informed about services in the community. North Carolina was required to provide at least quarterly "in-reach" to all those in adult care homes or state psychiatric hospitals – informative interactions with community providers about community mental health services, including interactions with those currently receiving the community services and visits to the sites of community service provisions. In-reach must start within 180 days of the settlement agreement and can only be suspended if the waiting list for community housing waivers more than doubles the number of available waivers for the current and next year. Should an individual decline to go into the community and instead express a preference to stay in an adult care home, after being informed of the community options, the state must extensively document how the person was informed, implement strategies to alleviate any concerns or objections to proceeding with the community integration plan, and continue to monitor the person in the adult care home while providing regular transition planning services.

Quality Assurance

North Carolina was also required to develop an extensive quality assurance program. The first requirement was to ensure there are enough community providers to manage all the services required under this settlement agreement for the entire target population. A transition oversight committee was to be formed to evaluate the overall success of the settlement agreement terms by reviewing several outcome variables semi-annually. Quality of life surveys were also to be administered three times to every person making the transition from an adult care home or state psychiatric hospital to a more integrated setting – prior to transition, eleven months after transition, and twenty-four months after transition. Finally, North Carolina was required to publish an annual report on its DHHS website, including several of the outcome variables. If North Carolina seems to not be meeting the long-term goals of the settlement agreement, then the state must reassess and take remedial measures.

New Hampshire

The Department of Justice sued New Hampshire and reached a settlement agreement in 2013. The target population included those currently institutionalized at either the state psychiatric hospital or a large nursing home for people with SMI, and those at risk for being institutionalized in either location. Those at risk of institutionalization were defined to include those who, within the last two years, had multiple admissions to the state psychiatric hospital, used mental health crisis or emergency services, were involved with the criminal justice system due to their mental health symptoms, or were otherwise unable to receive the mental health services they

need in the community. The settlement agreement did prioritize those who were currently institutionalized over those who were at risk for institutionalization.

Crisis Service

New Hampshire was required to develop a crisis services network to help prevent hospitalizations. Three major regions were identified within New Hampshire, each centering around a large population area (Manchester, Concord, and Nashua). For each region, a mobile crisis team was established that could respond within its region within one hour, available twenty-four hours a day and seven days a week. The mobile crisis team consisted of at least one peer specialist and one clinician with a psychiatrist on-call. The team could respond to law enforcement calls as well as general calls, and the goal was to respond to the individual and keep them in their community, with up to seven days aftercare to help them connect to services.

Additionally, New Hampshire developed four community crisis apartments for respite care, with two beds each. Clinical and peer specialist staff were to be available onsite at all times. People requiring the crisis apartments could stay up to seven days, and transportation was to be provided.

ACT

New Hampshire was required to develop ACT teams to offer case management, psychiatric services, employment/housing assistance, substance use treatment, and crisis intervention. If an individual had an ACT team, the team responded to any crisis rather than the mobile crisis unit. ACT teams should include a psychiatrist, nurse, masters level clinician, functional support worker, and a peer specialist. ACT teams were permitted a ratio of ten clients per team member, not including the psychiatrist. The immediate goal

for New Hampshire was to expand their current ACT teams to be able to provide services to 1500 people, with the intention to assess for future service needs so all eligible persons could have access to ACT services.

Supported Housing

Supported housing was also a major component of New Hampshire's settlement agreement. The state was to begin with a goal of 600 supported housing slots, and then adjust to increasing with demand, such that a comprehensive waiting list is established and when twenty-five or more people have waited for two months, the state must add housing slots to avoid individuals experiencing a six month wait. All housing must be scatter-site, and roommates were only acceptable if the individuals preferred to live with a roommate and they had separate bedrooms. The Department of Justice modified their definition of scatter-site here to be even more restrictive – only 2 units in the building or 10% of the building units, whichever is greater. The settlement agreement also clearly stated these requirements only had to be met by future community placements; people currently living in community residences with more than four people could stay if they desired or move if they desired.

Individuals in the nursing home with medically complex healthcare needs could be cared for in a residential setting in the community if they could not be adequately served in a cost-effective manner in supported housing. Each residential home was to provide housing and coordination of healthcare services for up to four individuals. The state started with a goal of sixteen such housing slots initially, and then developed a waitlist and protocol similar to that for general supported housing.

Supported Employment

New Hampshire was also required to develop a working supported employment service model, using the Dartmouth evidence-based model. While all people participating in ACT should be receiving supported employment services from their employment specialist team member, New Hampshire was to develop services for an additional 1000 people, then create a waitlist and plan to accommodate future demand reasonably.

Family and Peer Supports

New Hampshire was to provide family support services, including education for family members on skills and strategies to support their loved one with SMI. Additionally, New Hampshire was to provide three peer support centers open forty-four hours a week in each of the mental health regions in the state.

Transition Planning

Transition planning was to be person-centered and based on the assumption all can successfully live in the community with the proper supports. The individual should be supported in transition planning by a team that included members with appropriate cultural competence, members with experience treating people in the community, and members with experience in removing barriers to discharge. Each person's transition planning process should produce a written document that identified all barriers to discharge, services needed to overcome those barriers regardless of current availability, and a timeframe for each step to discharge. A new component of transition planning in New Hampshire was a schedule of post-transition visits by the community providers to the individual in their community housing to assess for adaptive adjustment.

Improper Admissions

The state was charged with no longer placing people in nursing homes unless unavoidable. Every potential admission to a nursing home must be pre-screened. In the event someone is still admitted, the state must document why they were not placed in the community as well as any barriers to community placement, and strategies to overcome those barriers.

Client & Guardian Counseling

New Hampshire was required to arrange for "in-reach" for all currently in a nursing home, at least quarterly, including community visits, opportunities to mingle with those currently living in integrated settings, and information about community mental health services. Individual meetings could be held for anyone expressing reticence to move into the community. If a client or guardian continued to be hesitant to move into the community, the attempts and objections must be fully documented, strategies must be developed to address their concerns, and they should be re-contacted at least annually.

Quality Assurance

A quality assurance system was also required to ensure community services were being offered with high quality and that the state was reaching its overarching goals of greater community integration and lower levels of hospitalization. The first stage was to confirm there were enough qualified community providers to handle the influx of formerly institutionalized individuals into the community. Each provider should be reviewed at least once every two years, and contracts renewals only given for those meeting performance-based standards congruent with the settlement agreement. The settlement agreement also required regular quality service reviews to assess common barriers to transition as well as factors in both successful and unsuccessful transitions to

plan for future improvements. Consumers, family members, and community providers should be regularly interviewed to identify gaps in services or where access is insufficient to meet demand. Finally, all information should be given to the court monitor annually.

CHAPTER 6: EMPIRICAL FINDINGS ON THE IMPACT OF *OLMSTEAD* ON MENTAL HEALTH SYSTEMS

This chapter will review empirical literature related to *Olmstead* published in peer-reviewed journals. Considering the ubiquity and depth of the *Olmstead* decision's impact on the mental health system, there is relatively little germane empirical literature available currently. To conduct this literature review, the author searched for "Olmstead" in any field except author name in PsycINFO, PsycCRITIQUES, and PsycARTICLES. Only 49 articles published in scholarly, peer-reviewed journals in 1999 or after were found.[13] Among those, several addressed only people with developmental disabilities or only *Olmstead's* implications in employment settings, both of which are beyond the scope of this dissertation. Even more were commentaries wherein the authors described the implications of *Olmstead* for various mental health programs or policies. Nine relevant articles with an empirical analysis were identified for inclusion in this chapter. Of the nine, most examined changes in service settings, perceptions of *Olmstead* or its success, or even how its litigation is typically settled.

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[13] The search initially returned 326 articles, but the author noted the majority of these were flagged due to authors with the last name "Olmstead." After adding a search parameter eliminating those red herrings, the number dropped to 49. Even within the 49, there were several false alarms that could only be sorted out by hand, such as an article about autopsies in Olmstead County, Minnesota.

Overall, the literature seems to indicate the number of people receiving services in institutions is decreasing, although not necessarily at a faster pace than pre-*Olmstead*. Smith, Lakin, Larson, & Salmi (2011) found that while there was a 21% increase between 1999 and 2009 in the number of people receiving residential services, there was an overall 28% decrease in the people receiving services in an institution. Salzer, Kaplan, & Atay (2006) found that while national rates of psychiatric hospitalizations continue to decrease overall, the years immediately following *Olmstead* actually showed a slower pace of deinstitutionalization as compared to the national rate in the 1990s. Similarly, Lakin, Prouty, Polister, & Coucouvanis (2004) noted that 2001 to 2003 saw the smallest reduction in state institutional populations in thirty years, both in absolute numbers and percentage decrease.

Seekins et al. (2011) surveyed 165 centers for independent living to assess their efforts to aid nursing home patrons moving into the more integrated centers for independent living, a common initiative of disability advocacy groups following the *Olmstead* decision. In a one-year time period, participants reported aiding nearly four thousand people in attempts to move into a more integrated setting, such as a center for independent living, and successfully moving over 60% of those patrons, with only 4% returning to a nursing home setting during the study period. Authors did not provide information on the disability type of the patrons being transitioned. Miller (2011) found that states with higher investment in home and community-based services had lower rates of use for nursing homes for people over 65, but that relationship did not hold for people aged 30-65.

Olmstead related litigation has been noted to be most commonly resolved by settlement (Ng, Wong, & Harrington, 2014). Bartels, Miles, Dums, & Levine (2003) surveyed clinicians and older adults with SMI in nursing homes and compared their perceptions of whether consumers could be appropriately receiving services in a more integrated setting. Consumers generally agreed with their clinicians at a rate no better than chance.

Only two articles addressed policies in a multistate context, and they focus on perceptions and elements of *Olmstead* plans. Zubritsky, Mullahy, Allen, & Alfano (2006) did a multistate survey and found that stakeholders from many states reported positive outcomes from *Olmstead* plan implementation, despite implementation limitations due to budget shortfalls. Consumers concurrently identified different understandings of *Olmstead* goals, but similar positive perceptions of outcomes. Both stakeholders and consumers agreed that more funding, housing options, and community support services were needed. Christensen & Byrne (2014) conducted an analysis of multiple *Olmstead* plans to gage the appreciation of built environment's role in community integration for people with all types of disabilities. They found that most states addressed housing and transportation, but not to the extent needed.

CHAPTER 7: THE PRESENT STUDY: HYPOTHESES AND METHODS

Missing from the available literature currently is a multi-state survey assessing the types of policies implemented and their outcomes, particularly in the context of SMI. As the courts are proving to be the primary battleground for determining *Olmstead* policy, an understanding of the legal framework's connection to policy outcomes is imperative.

The objective of this dissertation is to evaluate the relationships upon which the courts rely, as well as potential unintended side effects, specifically within the context of SMI. Consistent with the author's interdisciplinary training in clinical psychology and law, this dissertation empirically tests legal assumptions. The overarching hypothesis is that while the state may achieve markers the court has identified as relevant (e.g., lower numbers in the state psychiatric hospital), there may be unintended collateral damage (e.g., increased rates of incarceration), similar to that seen during the deinstitutionalization movement of the mid-twentieth century.

Olmstead Response Types

The independent variable in this study is *Olmstead* Response Type – the way the court interpreted the application of *Olmstead* to the litigated mental health policies, either through court opinion or acceptance of a proposed settlement agreement (see Table 4 for a summary of the *Olmstead* response types). To date, only two appellate courts have decided cases addressing the issues examined by this dissertation. The Third Circuit's requirements for a "good" *Olmstead* plan are simple but rigid: 1) written, with 2) set dates by which 3) an approximate number of people will be discharged from state hospitals, according to 4) explicit discharge criteria, and 5) "a general description of the collaboration required between the local authorities and the housing, transportation, care, and education agencies to effectuate integration into the community" (*Frederick L. v. Dept. of Public Welfare,* 2005, p. 160). The theory behind these requirements is that the state can be held accountable to clear benchmarks, and therefore, is more likely to reach

the appellate court's ultimate goal of fewer people in state hospitals. This is the first *Olmstead* response type, and it is represented by Pennsylvania.

Alternatively, the Ninth Circuit took a more nuanced view of *Olmstead's* purpose. Rather than requiring written, specific discharge plans, the Ninth Circuit's requirements for a "good" *Olmstead* plan are: 1) increases in funding for community-based services, including waiver programs, despite budget constraints, 2) regular, personalized evaluations assessing readiness for transition to the community as well as 3) support services needed in the community, and 4) a general trend towards fewer people in institutional settings. The theory behind these requirements is that the state is actively working towards fewer people in institutional settings, showing success at decreasing the hospital population, and setting people up for success in the community through increases in funding and personalized assessments to connect people to necessary resources. This is the second *Olmstead* response type, and it is represented by California, Washington, and Maryland.

The Department of Justice took a different approach in its settlement agreement requirements, focusing on infrastructure development of crisis services, ACT teams, and other supportive services, along with process development for transition planning and quality assurance. There were no requirements in the settlement agreements to show a reduction in the number of people in the state psychiatric hospitals, nursing homes, or assisted living facilities to a particular number or by a particular time. Rather, the focus was on creating the services in the community and the process by which to move people.

An overarching goal of decreased deinstitutionalization in favor of increased integration is stated, but with no specifics. The processed developed to move people into

the community is more than assertive – its aggressive; after the first settlement agreement detailed in this dissertation, only scatter-site housing is available to people leaving the state psychiatric hospital or assisted living facility, and people who decline to move into such housing are relentlessly pursued. The theory behind these requirements could be described as extreme integration, based on the belief it is best for all people to be scattered throughout the community, while provided with supportive services and treatment. This is the third *Olmstead* response type and it is represented by Georgia, Delaware, New Hampshire, and North Carolina.

Minnesota took its own approach. Now only was there intensive development that could rival a Department of Justice settlement, but there was also an emphasis on a trend of deinstitutionalization, consumer involvement in development of services, and consumer choice among services in each domain. The theory behind these requirements was that to access to services and choice for consumers was the best method for integration. This is the fourth *Olmstead* response type, represented by Minnesota only.

Florida was the only state to ultimately not be held as having violated the ADA, and therefore no requirements for a state plan adequately to supply a defense were outlined by the court. Their state psychiatric hospital was described as initiating discharge planning upon admission, coordinating with community care providers, and discharging people within thirty to sixty days of the treatment team determining they were eligible for community treatment. This is the fifth *Olmstead* response type, represented by Florida only.

Hypotheses

There are 5 major hypotheses for this dissertation, some broken into smaller, more specific hypotheses.

1) Most states, regardless of plan type, will be successful in reducing the institutionalized population in their state.
2) *Olmstead* plans will differ in their effects on budgets for community providers and state psychiatric hospitals.
    a) Unless an *Olmstead* plan includes specific requirements for increasing community-based treatment financial resources, such as required by the Ninth Circuit, community-based services will be funded the same or less, despite expected increases in their service population due to deinstitutionalization.
    b) On average, states will decrease funding for state psychiatric hospitals over time.
3) The numbers served in the community will not show a significant increase, despite a significant deinstitutionalization trend (Hypothesis 1), leaving open the possibility of transinstitutionalization or people with SMI otherwise not being adequately treated in the community.
4) The Third Circuit plan, as it only requires continued deinstitutionalization, will be associated with more negative outcomes than other plans, like the Ninth Circuit or Minnesota, which required substantial funding and development of community resources that promote consumer choice and engagement. DOJ states, which limit consumer choice to a narrow, proscribed model of community treatment, will also be associated with some negative outcomes, such as increased suicide

rates and rehospitalization rates, while not showing an increase in employment rates. The following variables will be examined:

a) Disability benefits, including percentage of the general population receiving disability benefits, the application rate for disability benefits, and the approval rate for disability benefits.
b) Suicide rates
c) Readmission rate after discharge from the state psychiatric hospital to any psychiatric hospital within thirty days
d) Employment rate for mental health clients, out of those who are employed, unemployed, or not in the workforce, (e.g., receiving disability benefits)
e) The state budget for the judiciary, police, and corrections
f) Incarceration Rate

5) Many states will fail to collect data on outcomes other than the institutionalized population in their state, especially if that is the only/primary outcome required by their court or noted in their *Olmstead* plan.

Data Sources

The dependent variables for this study are outcome measures either explicitly related to court goals for *Olmstead* policies (e.g., fewer people in the state psychiatric hospital over time, greater funding for community services, etc.) or possible collateral effects of *Olmstead* policies (e.g., employment rates among mental health consumers, suicide rates, etc.). All data were gathered from publicly available sources.[14]

[14] A spreadsheet documenting each piece of data used for these analyses and their sources, including individual URLs, is available from the author.

Uniform Reporting System. State mental health agencies must annually report multiple variables to SAMHSA's Center for Mental Health Services, as a requirement of the Community Mental Health Block Grant. NRI, Inc., the Research Institute for the National Association of State Mental Health Program Directors, collaborates with SAMHSA to analyze this data, along with some of SAMHSA's other public data sets. From 2007 to 2017, these data are available on SAMHSA's public data website as Uniform Reporting System PDFs for each state, each year. Prior to 2007, some of these variables are available in spreadsheets on NRI's public data website, also organized by state and year. Variables include numbers, rates, and demographics of those served in the state psychiatric hospital and in the community, use of evidence-based practices, insurance use, rehospitalization rates for the state psychiatric hospital or any hospital, employment and housing status, expenditures on services, and some diagnostic information. For this study, data on the following variables were collected: annual state budget for community mental health resources, annual state budget for state psychiatric hospitals, employment rate among mental health consumers accessing state mental health agency services, people served by the state psychiatric hospital, people served by community mental health resources, and the readmission rate after discharge from the state psychiatric hospital to any psychiatric hospital within thirty days. These data are used in testing hypothesis one, two, three, and four.

SSA Disability Claims. The federal government maintains a website dedicated to increasing public access to a plethora of municipal, county, state, and federal databases: data.gov. One of the datasets available on this website contains information about SSA Disability claims from 2001 to 2015. For this study, data on the annual rate of people

receiving disability benefits, the annual filing rate, and the annual approval rate were collected. These data are used in testing hypothesis four.

CDC National Vital Statistics System. The Center for Disease Control (CDC) has several public datasets available on its website, including the National Vital Statistics System (NVSS). The NVSS is maintained by communications between the CDC's National Center for Health Statistics and individual municipal, county, or state agencies that track events such as births, marriages, divorces, and deaths. Information gathered includes cause of death. Data on suicide rates were gathered from this data source, including all available years (1999 to 2016). These data are used in testing hypothesis four.

Bureau of Justice Statistics. The Bureau of Justice Statistics (BJS), a subdivision of the Department of Justice, puts out multiple publications series, reports, and datasets on issues such as corrections, law enforcement, and the court system. This study used two particular BJS datasets: the Justice Expenditure and Employment publication series (JEE) and the National Prisoner Statistics Program (NPSP). These two datasets had data available for decades, but 1996 was chosen as the starting point for two reasons – 1996 was at least five years prior to the earliest *Olmstead* litigation for the states in this study and starting at 1996 provided at least twenty years of information for the study (JEE's most recent available year was 2015 and NPSP's most recent available year was 2016). For this study, data were collected on the following variables: total annual state budget, annual state budget for the judiciary, annual state budget for the police, annual state budget for corrections, and incarceration rate. These data are used in testing hypothesis two and four.

U.S. Census Bureau. Annual population estimates for each state were gathered from the U.S. Census Bureau to calculate per capita spending or instances of an occurrence of interest (e.g., suicide or incarceration) per a set number of members of the general public. Some JEE reports included population from the U.S. Census Bureau; similarly, the CDC calculated suicide rates using information from the U.S. Census Bureau. Otherwise, the information was gathered from the U.S. Census Bureau's website directly. These data are used in testing hypothesis one, two, three, and four.

Dependent Variables

When appropriate, per capita rates, instances per 1,000 or 100,000 members of the general population, or percentage of the population rates were chosen over absolute numbers to improve interpretability of statistical tests; this method minimizes the limitations of comparing states of significantly different size (e.g., California and New Hampshire) while still allowing for examination of variation over time. See Table 5 for a summary of dependent variables, their corresponding model (organized by hypothesis number), and information about the data source.

Hypothesis 1 - The dependent variable for this hypothesis was the number of persons served in the state psychiatric hospital in the past year per 1000 people in the general population, as reported in the NRI/SAMHSA data. Data were available for 2001-2017.

Hypothesis 2 - The dependent variables for Hypothesis 2 are per capita expenditures for state psychiatric hospitals and community mental health services for

each of the relevant ten states in 1990, 1997, and 2001-2016, except for 2008. Per capita expenditures were typically available in the NRI/SAMHSA data, but when they were not, they were calculated using either the population estimate used in the NRI/SAMHSA databases to calculate other per capita rates for that state and year, or the population estimate for that state and year available on the U.S. Census website.

Hypothesis 3 - The dependent variable for this hypothesis was the number of persons served by community mental health providers in the past year per 1000 people in the general population, as reported in the NRI/SAMHSA data. Data were available for 2001-2017.

Hypothesis 4 - Model 4Ai had as its dependent variable the percentage of the general population receiving SSA disability benefits in a given fiscal year. Model 4Aii had as its dependent variable the percentage of individuals who filed for disability benefits in a given fiscal year. Model 4Aiii had as its dependent variable the percentage of received applications that were approved in a given fiscal year. Data were available for 2001-2015.

Model 4B had as its dependent variable the annual suicide rate per 100,000 members of the state general population, 1999-2016. Model 4C had as its dependent variable the readmission rate within thirty days to any psychiatric hospital after discharge from the state psychiatric hospital. Model 4D had as its dependent variable the state's employment rate for mental health clients, out of those who are employed, unemployed, or not in the workforce, (e.g., receiving disability benefits). For models 4C and 4D, data were available from 2007-2017.

Model 4Ei had as its dependent variable the per capita rate of total state expenditures for the judicial system from 1996-2015, whether originating in the state budget, county budget, or city budget. Model 4Eii was the same, but for law enforcement spending. Similarly, Model 4Eiii looked at correctional spending. The per capita rate was calculated using annual general state population census from the U.S. Census Bureau via BJS Justice Expenditure and Employment publication series, except 1999-2001, which is from the U.S. Census Bureau directly.

The dependent variable for Model 4F is the annual state prison incarceration rate, 1996-2016, calculated as the number of prisoners per state with a sentence of more than 1 year per 1,000 residents of that state. The annual end-of-year inmate census numbers are from the BJS National Prisoner Statistics Program, while the annual general state population census is from the U.S. Census Bureau via BJS Justice Expenditure and Employment publication series, except 1999-2001 and 2016, which is from the U.S. Census Bureau directly. The California count includes all inmates in their custody, not jurisdiction. The Delaware count includes those incarcerated in local jails, as they have an integrated system. All counts include those housed in private facilities. In Florida, administrators modified the methods by which they counted inmates between 2006 and 2007.[15] Georgia numbers in 1999 and 2005-2010 are underestimates because they exclude a number of individuals committed to the state correctional system waiting for transfer in the local jails. In Washington, numbers are overestimates because a state law

[15] Florida did have a significant jump between 2006 and 2007 that is not accounted for by the linear slope of time ($\beta_{21} = .631$, $t(8) = 2.711$, $p = .027$). The jump was present only for Florida, not for any other states or on average across states ($\beta_{20} = .006$, $t(8) = .35$, $p = .735$). Results for Florida on this variable should be interpreted cautiously, with this limitation in mind.

made effective in 1999 allowed some individuals with a sentence of less than a year to be housed in the state correctional system.

Hypothesis 5 - The dependent variable for Hypothesis 5 was the rate of missing data for the other four hypotheses.

Data Analysis Strategy

For Hypotheses 1-4, data were analyzed using piecewise growth curve modeling (GCM) techniques in HLM 7.0 software (Bryk & Raudenbush, 2002). GCM is advantageous for examining changes in trends over time because it accounts for the interdependence of repeated measures, which are nested within states. A piecewise GCM with a deviation slope was chosen for these analyses as it allows for a comparison of distinct time periods within the overall model, such as pre- and post-litigation. Time was measured in years and coded so the intercept is the most recent year for which there are data available at the time of these analyses. The primary slope was defined by the time variable, which when modeled alone shows the average change over all years (Hoffman, 2015). However, when the time variable is modeled with the deviation slope (defined as the period post-litigation for each state), time becomes the pre-litigation slope (Hoffman, 2015, p. 238). All models were also tested for a potential "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in the dependent variable the year after litigation.

The final model to be tested for each dependent variable (outcome), except the budget variables, is:

Level-1 Model

$$OUTCOME_{ti} = \pi_{0i} + \pi_{1i}*(TIME_{ti}) + \pi_{2i}*(POSTLITS_{ti}) + \pi_{3i}*(JUMP_{ti}) + e_{ti}$$

Level-2 Model

$$\pi_{0i} = \beta_{00} + r_{0i}$$
$$\pi_{1i} = \beta_{10} + r_{1i}$$
$$\pi_{2i} = \beta_{20} + \beta_{21}*(RESPONSE_i) + r_{2i}$$
$$\pi_{3i} = \beta_{30} + \beta_{31}*(RESPONSE_i) + r_{3i}$$

The final model to be tested for each budget dependent variable is (TOTSTPC = total state budget per capita):

Level-1 Model

$$OUTCOME_{ti} = \pi_{0i} + \pi_{1i}*(TIME_{ti}) + \pi_{2i}*(POSTLITS_{ti}) + \pi_{3i}*(JUMP_{ti}) + \pi_{4i}*(TOTSTPC_{ti}) + e_{ti}$$

Level-2 Model

$$\pi_{0i} = \beta_{00} + r_{0i}$$
$$\pi_{1i} = \beta_{10} + r_{1i}$$
$$\pi_{2i} = \beta_{20} + \beta_{21}*(RESPONSE_i) + r_{2i}$$
$$\pi_{3i} = \beta_{30} + \beta_{31}*(RESPONSE_i) + r_{3i}$$
$$\pi_{4i} = \beta_{40}$$

There are no missing data at Level 2 (state level) for any analyses. Membership in each of the 5 *Olmstead* response types was individually coded as a binary Level 2 variable. Level 1 (repeated measures) had multiple missing data points. For Hypothesis 1, no data were available for 2003 on any states, along with eight additional missing data points, for a total of 10.5% missing data (152/170). For each model in Hypothesis 2, 3.5% (6/170) of data at Level 1 are missing. In Hypothesis 3, a total of 16% of the data are missing (143/170). For Hypothesis 4, only Models 4C, 4D, and 4Ei-4Eiii were missing data at Level 1; for 4C, 50% of the data were missing (55/110). For Model 4D, only three data points were missing for a total of 2.73% (3/110). For Models 4Ei-4Eiii,

BJS reports for 2001 and 2003 were inexplicably missing the variables used for this analysis in both the PDFs and the spreadsheets, so two of the twenty years were missing (10%). For more information on missing data, please see the results of Hypothesis 5.

Data analysis was conducted in two phases. First, descriptive statistics (see Table 6) and basic analyses were conducted to screen for problematic data patterns or contraindications to proceeding with the planned analyses. Second, a step-by-step modeling building approach was used to create each model, and each step in the modeling building process is reported in the results section. As the model building approach involved comparing nested models that varied on fixed effects, full information maximum likelihood (FIML) estimation was used, until the final model was reached. For the final model, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). Due to the small number of Level 2 units (N = 10), robust standard error estimates for fixed effects were not available. However, the dependent variables' distributions did not deviate so far from normality as to require a transformation (see Table 6).

For Hypothesis 5, rates of missing data from the other four hypotheses' dependent variables will be examined. There were no missing data for Hypothesis 5.

CHAPTER 8: THE PRESENT STUDY: RESULTS

For descriptive statistics for Hypotheses 1-4, see Table 6.

Hypothesis 1

For the first stage of model building, the random intercept only model (no

predictors) of the hospitalization rate for the state psychiatric hospital provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean hospitalization rate over time ($\chi^2(9) = 121.699$, $p < .001$), which was .533 instances per 1000 people in the state. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in per capita spending rates attributable to between state differences, as opposed to within state differences) was .423 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2017. Time was a significant predictor of change in hospitalization rates, such that on average across states, each year brought a decrease of .032 instances per 1000 people ($t(142) = -7.285$, $p < .001$), with the average in 2017 being .276. In the random intercept only model, the Level 1 variance (σ^2) was .09382, which was reduced to 0.06831 (residual variance) by the addition of time to the model, indicating time explains 27% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(2) = 45.048$, $p < .001$).

When the effect of time was allowed to vary randomly across the states, there was significant variation ($\chi^2(9) = 276.179$, $p < .001$), indicating states did not change their hospitalization rates over time at the same pace. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 120.694$, $p < .001$). The residual variance was reduced by an additional 47% ($\sigma^2 = 0.02388$).

To examine potential differences in change over time by *Olmstead* response type (Level 2 predictor), each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and

examined individually in its own model; they were coded so a value of 1 indicated engagement in that response type. None of the results were significant, although the DOJ states approached significance for a faster rate of decline over time (the nested model comparison was significant ($\chi^2(2) = 23.742$, $p < .001$). See Table 7 for additional details on these analyses. State psychiatric hospitalization rates over time are shown graphically in Figure 3.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope. In the new model, on average across all ten states, every year prior to litigation brought a decrease of .054 hospitalizations per 1000 people ($t(9) = -3.438$, $p = .007$), but post-litigation, this rate of deinstitutionalization slowed significantly ($\beta_{20} = .032$, $t(132) = 2.396$, $p = .018$), for an average in 2017 of .297. The residual Level 1 variance was only slightly reduced to 0.02349, but a nested model comparison did show significant improvement ($\chi^2(1) = 5.075$, $p = .023$). This indicates that on average, states changed their trajectory of deinstitutionalization after litigation.

When the post-litigation slope was allowed to vary randomly by state, it became insignificant ($t(9) = 1.296$, $p = .227$). However, there was significant between state variation ($\chi^2(6) = 36.396$, $p < .001$), indicating states vary in the degree to which litigation impacted their deinstitutionalization rate. A nested model comparison was also

significant ($\chi^2(3) = 31.447$, $p < .001$). The Level 1 residual variance was reduced by an additional 5% ($\sigma^2 = 0.01876$). The potential for a "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in hospitalization rates the year after litigation was tested, but not supported when fixed ($\beta_{30} = -.044$, $t(122) = -0.981$, $p = .329$) or allowed to vary ($\chi^2(6) = 26.305$, $p > .5$; nested model comparison: $\chi^2(5) = 2.029$, $p > .5$), so the more parsimonious model with only two slopes was retained.

To examine potential differences in the degree to which litigation impacted a state's deinstitutionalization trajectory by *Olmstead* response type, each approach was tested for a significant impact on the post-litigation deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so a value of 1 indicated engagement in that response type. Only the DOJ states had significant results, such that, on average, the DOJ states had a faster rate of deinstitutionalization after litigation than the other states (nested model comparison: $\chi^2(1) = 7.723$, $p = .006$). See Table 8 for additional details on these analyses.

For the final model, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). The average pre-litigation slope showed significant decline over time of approximately .07 instances per 1000 people per year. Non-DOJ states slowed, almost significantly, from this pace after litigation; however, DOJ states, did not slow their rate of deinstitutionalization. There remained significant variation between states in the average rate of hospitalization in 2017 ($\chi^2(6) = 32.934$, $p < .001$), average rate of change pre-litigation ($\chi^2(6) = 186.898$, $p < .001$), and average rate of change post-litigation ($\chi^2(5) = 58.194$, $p < .001$),

encouraging consideration of additional factors. A total of 80% of the Level 1 variance was explained by the final model ($\sigma^2 = 0.01958$). See Table 9 for more details on the final model.

Hypothesis 2

General descriptive statistics for covariates and dependent variables are available in Table 6. Table 10 shows correlations between per capita spending on community mental health, state psychiatric hospitals, and the total state budget.

Model 2A

For the first stage of model building, the random intercept only model (no predictors) of the per capita spending rate for community mental health services provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean amount of spending on community mental health services over time ($\chi^2(9) = 255.922$, $p < .001$), which was $82.22. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in per capita spending rates attributable to between state differences, as opposed to within state differences) was .605 (Davis & Scott, 1995).

Before adding the fixed effect of time, the per capita spending rate of the entire state budget was added into the model as a covariate. Variations like inflation, state budget shortfalls, or the general health of the state's economy will have a less misleading impact on the interpretation of the dependent variable if the model accounts for the overall state budget. The state budget was entered group-mean centered, to reduce issues

with multicollinearity and model convergence. The overall state budget per capita rate was a significant predictor of the state community treatment per capita rate, so that, on average across all states and years, for every dollar increase in the state budget, the community mental health treatment budget increased 1.5 cents ($t(118) = 11.501$, $p < .001$). For comparison, a separate model estimated with FIML examining only the fixed effect of time on the total state budget showed that on average across states, the total state budget per capita rate grew by $292.79 per year ($t(169) = 43.13$, $p < .001$) for a total of $10,729.29 in 2015.

The Level 1 variance (random intercept only model: $\sigma^2 = 1342.44648$) was reduced by 66% (residual variance: $\sigma^2 = 449.99744$) by the addition of the state budget to the model, indicating the total state budget explains 66% of the variance in the community treatment budget (Level 1 dependent variable). Additionally, a nested model comparison supported the inclusion of the state budget, ($\chi^2(1) = 483.708$, $p < .001$).

The research question for this hypothesis primarily centers on examining variance in the rate of correctional spending as compared to the total state budget (i.e., does it grow at the same rate?), as opposed to variance in the relationship between spending on community treatment and the total state budget (i.e., for every dollar increase in the state budget, how much does community treatment spending change?); therefore, the slope for the total state budget was modeled only as a fixed effect to preserve parsimony and avoid model convergence issues.

Prior to looking at the effect of time on community mental health spending while controlling for the total state budget, the fixed effect of time alone was examined. Time was added uncentered and coded so the intercept represents 2016. Time was a significant

predictor of change in spending trends, such that on average across states, each year brought an increase of $3.93 per capita spending on community mental health services ($t(153) = 13.213$, $p < .001$), with the average in 2016 being $119.78. In the random intercept only model, the Level 1 variance (σ^2) was 1342.44648, which was reduced to 629.23558 by the addition of time to the model, indicating time explains 53% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 116.73623$, $p < .001$).

Next, the fixed effect of time while controlling for total state budget was examined. As the state budget is now in the model again, the interpretation of the time coefficient is not just general change over time, but the unique pattern of change over time of the community mental health budget, after accounting for the total state budget. On average across states over time, for every dollar increase in the total state budget, the community mental health budget increased only 1.6 cents ($t(117) = 4.393$, $p < .001$). After controlling for the total state budget, the community mental health budget did not have significant change over time, indicating it grew at the same pace as the total state budget ($\beta_{10} = -0.48$, $t(117) = -0.446$, $p = .657$). The residual variance was reduced to 34% ($\sigma^2 = 449.28481$), and a nested model comparison supported the inclusion of both time and the total state budget covariate, ($\chi^2(1) = 368.585$, $p < .001$).

When the effect of time was allowed to vary randomly across the states, there was significant variation ($\chi^2(9) = 99.837$, $p < .001$), indicating states did not change their community mental health budgets over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 61.96$, $p < .001$). The Level 1 variance was reduced by an additional 15% ($\sigma^2 =$

264.15187).

To examine potential differences in change over time by *Olmstead* response type (Level 2 predictor), each approach was tested for a significant impact on the intercept and slope for time. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so a value of 1 indicated engagement in that response type. Only the Third Circuit, as represented by Pennsylvania had significant results, such that Pennsylvania, was spending $188.57 more than other states on average in 2016. On average across states over time, for every dollar increase in the total state budget, the community mental health budget increased only .8 cents ($t(108) = 2.508$, $p = .014$). While the other states did not show change over time after accounting for the total state budget ($\beta_{10} = 1.013$, $t(8) = .952$, $p = .369$), Pennsylvania's community mental health budget grew at a rate faster than the other states ($\beta_{11} = 7.353$, $t(8) = 3.797$, $p = .005$). See Table 11 for additional detail on these analyses. Community mental health treatment budget per capita rates over time are shown graphically in Figure 4 and total state budget per capita rates over time are shown graphically in Figure 5.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the unique rate of change for the community mental health budget across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope, again, only for the community mental health budget's unique effect after controlling for the total state budget.

In the new model, on average across all ten states, for every dollar increase in the total state budget, the community mental health budget increased .8 cents ($t(107) = 2.223$, $p = .028$). The pre-litigation community mental health budget did not significantly change over time after accounting for the total state budget ($\beta_{10} = 1.78$, $t(9) = 1.302$, $p = .225$), and the post-litigation period continued that trend ($\beta_{20} = .213$, $t(107) = .334$, $p = .739$). The Level 1 variance was not reduced. This indicates that on average, states grew their community mental health budget at the same rate as their general budget, and this did not vary significantly after litigation.

When the post-litigation slope was allowed to vary randomly by state, it remained insignificant ($t(9) = .182$, $p = .86$). While there was significant variation in the post-litigation slope ($\chi^2(9) = 41.1$, $p < .001$), a nested model comparison was not significant ($\chi^2(3) = 0.033$, $p > .5$). When the chi-square statistics conflict, it is best practice to defer to the results of the chi-square difference test contained in the nested model comparison (Singer & Willett, 2003); therefore, the post-litigation slope will not be allowed to vary. Similarly, the jump was not significant on average ($t(97) = -1.306$, $p = .195$); however, it showed significant variation between states ($\chi^2(6) = 12.567$, $p = .050$). A nested model comparison indicates the jump is statistically significant, so it will be allowed to vary randomly ($\chi^2(4) = 25.539$, $p < .001$).

To examine potential differences in the degree to which litigation impacted a state's community mental health spending growth trajectory by *Olmstead* response type, both immediately and over time after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was

entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type.

Statistically significant increases in mental health budget occurred only in the states where there had been a DOJ intervention. On average across states over time, for every dollar increase in the total state budget, the community mental health budget increased only .8 cents ($t(96) = 2.553$, $p = .012$). Prior to litigation, states on average did not change their community mental health budget over time significantly, after controlling for the total state budget ($\beta_{10} = 1.526$, $t(9) = 1.039$, $p = .326$). This trend did not change after litigation for states other than DOJ states ($\beta_{20} = 0.557$, $t(96) = .701$, $p = .485$). However, DOJ states differed significantly from other states after litigation by spending more ($\beta_{21} = 4.035$, $t(96) = 2.172$, $p = .032$). DOJ states also approached significance for a decrease immediately after litigation that is beyond what would be expected given the slopes of pre- and post-litigation change. See Table 12 for additional detail on these analyses.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). On average across states over time, for every dollar increase in the total state budget, the community mental health budget increased only .8 cents ($t(96) = 2.514$, $p = .014$). Prior to litigation, states on average did not change their community mental health budget over time significantly, after controlling for the total state budget ($\beta_{10} = 1.523$, $t(9) = .995$, $p = .346$). This trend did not change after litigation for states other than DOJ states ($\beta_{20} = 0.514$, $t(96) = .622$, $p = .535$). However, DOJ states differed significantly from other states after litigation by spending more ($\beta_{21} = 4.04$, $t(96) = 2.078$, $p = .04$). DOJ states also approached

significance for a decrease immediately after litigation that is beyond what would be expected given the slopes of pre- and post-litigation change.

There remained significant variation between states in their community mental health budget per capita rate in 2016 ($\chi^2(9) = 137.919$, $p < .001$), average rate of increase pre-litigation ($\chi^2(9) = 90.159$, $p < .001$), and in the average sharp change immediately post-litigation ($\chi^2(8) = 49.319$, $p < .001$), encouraging consideration of additional factors. A total of 86% of the Level 1 variance was explained by the final model ($\sigma^2 = 192.5717$). See Table 13 for more details.

Model 2B

For the first stage of model building, the random intercept only model (no predictors) of the per capita spending rate for state psychiatric hospitals provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean amount of spending on state psychiatric hospitals over time ($\chi^2(9) = 344.222$, $p < .001$), which was $33.18. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in per capita spending rates attributable to between state differences, as opposed to within state differences) was .676 (Davis & Scott, 1995).

Before adding the fixed effect of time, the per capita spending rate of the entire state budget was added into the model as a covariate. Variations like inflation, state budget shortfalls, or the general health of the state's economy will have a less misleading impact on the interpretation of the dependent variable if the model accounts for the overall state budget. The state budget was entered group-mean centered, to reduce issues

with multicollinearity and model convergence. The overall state budget per capita rate was a significant predictor of the state psychiatric hospital per capita rate, so that, on average across all states and years, for every dollar increase in the state budget, the state psychiatric hospital budget increased .07 cents ($t(118) = 2.217$, $p = .029$). For comparison, a separate model estimated with FIML examining only the fixed effect of time on the total state budget showed that on average across states, the total state budget per capita rate grew by $292.79 per year ($t(169) = 43.13$, $p < .001$) for a total of $10,729.29 in 2015.

The Level 1 variance (random intercept only model: $\sigma^2 = 41.88091$) was reduced by 30% (residual variance: $\sigma^2 = 29.48985$) by the addition of the state budget to the model, indicating the total state budget explains 30% of the variance in the state psychiatric hospital budget (Level 1 dependent variable). Additionally, a nested model comparison supported the inclusion of the state budget, ($\chi^2(1) = 274.98$, $p < .001$).

The research question for this hypothesis primarily centers on examining variance in the rate of spending on the state psychiatric hospital as compared to the total state budget (i.e., does it grow at the same rate?), as opposed to variance in the relationship between state psychiatric hospital spending and the total state budget (i.e., for every dollar increase in the state budget, how much does state psychiatric hospital spending change?); therefore, the slope for the total state budget was modeled only as a fixed effect to preserve parsimony and avoid model convergence issues.

Prior to looking at the effect of time on state psychiatric hospital spending while controlling for the total state budget, the fixed effect of time alone was examined. Time was added uncentered and coded so the intercept represents 2016. Time was a significant

predictor of change in spending trends, such that on average across states, each year brought an increase of 28 cents per capita spending ($t(153) = 3.826$, $p < .001$), with the average in 2016 being $35.86. In the random intercept only model, the Level 1 variance (σ^2) was 41.88091, which was reduced to 38.25225 by the addition of time to the model, indicating time explains 9% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 13.986$, $p < .001$).

Next, the fixed effect of time while controlling for total state budget was examined. As the state budget is now in the model again, the interpretation of the time coefficient is not just general change over time, but the unique pattern of change over time of the state psychiatric hospital budget, after accounting for the total state budget. Neither the total state budget ($\beta_{20} = .0014$, $t(117) = 1.494$, $p = .138$) nor time ($\beta_{10} = -0.207$, $t(117) = -.760$, $p = .449$) were significant predictors of state psychiatric hospital spending when included in a model together. The residual variance was reduced to 70% ($\sigma^2 = 29.33223$), and a nested model comparison of the model with both showed improvement when compared to time only ($\chi^2(1) = 261.659$, $p < .001$), but not when compared to the total state budget only ($\chi^2(1) = .664$, $p > .5$).

When the effect of time was allowed to vary randomly across the states, there was significant variation ($\chi^2(9) = 111.066$, $p < .001$), indicating states did not change their state psychiatric hospital budgets over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 49.472$, $p < .001$). The Level 1 variance was reduced by an additional 32% ($\sigma^2 = 15.86467$).

To examine potential differences in change over time by *Olmstead* response type

(Level 2 predictor), each approach was tested for a significant impact on the intercept and slope for time. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so a value of 1 indicated engagement in that response type. There were no significant results. See Table 14 for additional detail on these analyses and state psychiatric hospital budget per capita rates over time are shown graphically in Figure 6.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the unique rate of change for the state psychiatric hospital budget across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope, again, only for the state psychiatric hospital budget's unique effect after controlling for the total state budget.

In the new model, neither the total state budget (β_{30} = .001, $t(107)$ = 1.105, p = .272) nor time (β_{10} = .012, $t(9)$ = .029, p = .977) were significant predictors of state psychiatric hospital spending. Additionally, the post-litigation slope did not deviate from the pre-litigation slope (β_{20} = -.264, $t(107)$ = -.808, p = .421). The residual variance was not reduced and a nested model comparison did not show significant improvement ($\chi^2(1)$ = .618, $p > .5$).

When the post-litigation slope was allowed to vary randomly by state, it remained insignificant ($t(9)$ = -.98, p = .353). There was not significant variation in the post-litigation slope ($\chi^2(9)$ = 11.09, p = .269) and a nested model comparison was not

significant ($\chi^2(3) = 6.361$, $p = .094$); therefore, the post-litigation slope will not be allowed to vary. Similarly, the jump was not significant on average ($t(106) = -1.103$, $p = .383$); however, it showed significant variation between states ($\chi^2(9) = 18.274$, $p = .032$) and a nested model comparison was significant, so it will be allowed to vary randomly ($\chi^2(3) = 8.568$, $p = .035$).

To examine potential differences in the degree to which litigation impacted a state's spending growth trajectory by *Olmstead* response type, both immediately and over time after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. The Ninth Circuit and Minnesota had significant results. In both models, neither the total state budget (Ninth: $\beta_{40} = -.0004$, $t(96) = -0.455$, $p = .65$; Minnesota: $\beta_{40} = -.0004$, $t(96) = .561$, $p = .576$) nor pre-litigation time (Ninth: $\beta_{10} = .392$, $t(9) = 1.036$, $p = .327$; Minnesota: $\beta_{10} = .198$, $t(9) = .517$, $p = .618$) were significant predictors of state psychiatric hospital spending. In neither model did post-litigation spending deviate from the pre-litigation trajectory (Ninth: $\beta_{20} = -.379$, $t(96) = -1.035$, $p = .303$; Minnesota: $\beta_{20} = -.303$, $t(96) = -1.080$, $p = .283$). The Ninth circuit did have an immediate increase in spending the year after litigation, while Minnesota had an immediate decrease the year after litigation, but then continued to annually increase its funding after litigation more than other states. See Table 15 for additional detail on these analyses.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). Neither the total state

budget (β_{40} = -.00014, $t(96)$ = -0.167, p = .868) nor pre-litigation time (β_{10} = .306, $t(9)$ = .767, p = .463) were significant predictors of state psychiatric hospital spending. The post-litigation spending did not deviate from the pre-litigation trajectory (β_{20} = -.191, $t(96)$ = -.623, p = .535). The Ninth circuit did have an immediate increase in spending the year after litigation, while Minnesota had an immediate decrease the year after litigation. Minnesota then continued to annually increase its funding after litigation more than other states, although this difference was just shy of significance.

There remained significant variation between states in their state psychiatric hospital budget per capita rate in 2016 ($\chi^2(9) = 212.11$, $p < .001$), average rate of change pre-litigation ($\chi^2(9) = 70.122$, $p < .001$), but not in the average sharp change immediately post-litigation ($\chi^2(7) = 12.344$, $p = .089$), encouraging consideration of additional factors for all but the latter. A total of 68% of the Level 1 variance was explained by the final model ($\sigma^2 = 13.53483$). See Table 16 for more details.

Hypothesis 3

General descriptive statistics for dependent variables are available in Table 6. For the first stage of model building, the random intercept only model (no predictors) of the rate of people receiving mental health services in the community provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean rate of people receiving mental health services in the community over time ($\chi^2(9) = 207.868$, $p < .001$), which was 14.86 instances per 1000 people in the state. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in per capita spending rates attributable to between state differences, as opposed to within

state differences) was .592 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2017. Time was a significant predictor of change in community mental health service rates, such that on average across states, each year brought an increase of .436 instances per 1000 people ($t(133) = 5.762$, $p < .001$), with the average in 2017 being 18.142. In the random intercept only model, the Level 1 variance (σ^2) was 887.018161, which was reduced to 17.92177 by the addition of time to the model, indicating time explains 20% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 29.649$, $p < .001$). There still remains significant between state variation in community mental health service rates in 2017, encouraging consideration of additional factors to further explain the variation ($\chi^2(9) = 262.367$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 166.397$, $p < .001$), indicating states did not change their community treatment rates over time at the same pace. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 81.781$, $p < .001$). The Level 1 variance was reduced by an additional 43% ($\sigma^2 = 8.26586$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so a value of 1 indicated engagement in that response type. Minnesota grew its community treatment numbers at a significantly

faster rate (β = 1.311, $t(8)$ = 2.399, p = .043) than the other states on average (β = .298, $t(8)$ = 1.715, p = .125) from 2001 to 2017, with the average in 2017 being 16.32. See Table 17 for additional details on these analyses. Community mental health treatment rates over time are shown graphically in Figure 7.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope. In the new model, on average across all ten states, every year prior to litigation brought an increase of .633 people served in the community per 1000 people ($t(9)$ = 2.44, p = .037), and post-litigation, this rate slowed, but not significantly (β_{20} = -.312, $t(123)$ = -1.335, p = .184), for an average in 2017 of 17.879. The Level 1 variance was only slightly reduced by 1% to 8.02297, and a nested model comparison did not show significant improvement ($\chi^2(1)$ = 1.473, p = .223). This indicates that on average, states did not change their growth rate of community treatment after litigation.

When the post-litigation slope was allowed to vary randomly by state, it remained insignificant ($t(9)$ = -0.935, p = .374). However, there was significant between state variation ($\chi^2(6)$ = 31.86, p < .001), indicating states vary in the degree to which litigation impacted their community treatment growth rate. A nested model comparison was also significant ($\chi^2(3)$ = 10.38, p = .015). The Level 1 variance was reduced by an additional 5% (σ^2 = 6.82248). The potential for a "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in community treatment

rates the year after litigation was tested. The effect was significant when fixed (β_{30} = -2.576, $t(113)$ = -3.113, p = .002) but not when allowed to vary (β_{30} = -2.52, $t(9)$ = -2.05, p = .071; $\chi^2(6)$ = 8.047, p = .234; nested model comparison: $\chi^2(4)$ = 8.977, p = .061), so the more parsimonious model with two slopes randomly varying and a fixed effect for the jump was retained.

To examine potential differences in the degree to which litigation impacted a state's spending growth trajectory by *Olmstead* response type, both immediately and over time after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See Table 18 for additional details on these analyses.

For the final model, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). The average pre-litigation slope was not significant, indicating states were not modifying their community treatment rates on average prior to their litigation. The exception was Minnesota, which was growing their community treatment each year by 2.64 people per 1000 members of the general population. The post-litigation slope did not show significant deviation from the pre-litigation slope; however, there was an average a jump down in the rate of people seeking mental health treatment services in the community in the year after litigation.

Overall, on average across states in 2017, almost 20 people out of every 1000 were receiving mental health services in the community. There remained significant

variation between states in the community treatment rate in 2017 ($\chi^2(6) = 167.123$, $p < .001$), average rate of change pre-litigation ($\chi^2(5) = 84.989$, $p < .001$), and average rate of change post-litigation ($\chi^2(5) = 34.143$, $p < .001$), encouraging consideration of additional factors. A total of 70% of the Level 1 variance was explained by the final model ($\sigma^2 = 6.77543$). See the Table 19 for more details.

Hypothesis 4

The fourth hypothesis look at potential side effects of *Olmstead* policies. See table 6 for descriptive statistics on all covariates and dependent variables in Hypothesis 4.

Models 4Ai-4Aiii

Models 4Ai, 4Aii, and 4Aiii all looked at variables related to disability benefits – disability benefit recipient rates, disability benefit application rates, and disability benefit application approval rates, respectively. Across all states and years, the variables were significantly correlated with each other, although the rate at which applications were approved was negatively associated with both the percentage of people receiving benefits and the percentage of people filing applications ($p < .001$ for all; see Table 20).

Model 4Ai

For the first stage of model building, the random intercept only model of the percentage of the general population receiving SSA disability benefits provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean percentage of people receiving SSA disability benefits over time ($\chi^2(9) =$

231.98, $p < .001$), which was 5.41%. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in disability benefit rates attributable to between state differences, as opposed to within state differences) was .623 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2015 (most recent year data are available). Time was a significant predictor of change in disability benefit rates, such that on average across states, each year brought an increase of .13% of the general population receiving disability benefits ($t(139) = 30.511$, $p < .001$), with the average in 2015 being 6.32%. In the random intercept only model, the Level 1 variance (σ^2) was 0.38928, which was reduced to .05089 by the addition of time to the model, indicating time explains 87% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 284.851$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 376.479$, $p < .001$), indicating states did not change their disability benefits percentage over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 145.72$, $p < .001$). The Level 1 variance was reduced by an additional 9% ($\sigma^2 = .01407$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. The Ninth Circuit had the only significant result, with their disability

benefit rates in 2015 being significantly lower than the other states, by 1.39%. The DOJ and Third Circuit trended towards significance, both in being higher than other states in their disability rates in 2015. See table 21 for additional details on these analyses. Percentage of people receiving disability benefits over time are shown graphically in Figure 8.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope. In the new model, on average across all ten states, every year prior to litigation brought an increase of .14% in the percentage of people receiving disability benefits ($t(9) = 9.142$, $p < .001$), and the post-litigation time period was not associated with a significant difference in that trend ($t(129) = -1.063$, $p = .29$), for an average in 2015 of 6.31%. The Level 1 variance was only slightly reduced to .01402, and a nested model comparison did not show significant improvement ($\chi^2(1) = 1.094$, $p = .296$). This indicates that on average, states did not change their trajectory of disability benefits growth after litigation.

However, when the post-litigation slope was allowed to vary randomly by state, while the post-litigation deviation in slope remained insignificant ($t(9) = -0.852$, $p = .416$), there was significant variation ($\chi^2(6) = 59.627$, $p < .001$), indicating states vary in the degree to which litigation impacted their disability benefits growth trajectory. A

nested model comparison was significant ($\chi^2(3) = 30.672$, $p < .001$). The Level 1 variance was reduced by an additional 1% ($\sigma^2 = .01001$). Similarly, the "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in disability benefit rates the year after litigation was not significant on average ($t(119) = 1.224$, $p = .224$), but it did show significant variation by state ($\chi^2(6) = 32.371$, $p < .001$) with a significant nested model comparison ($\chi^2(5) = 20.079$, $p = .002$).

To examine potential differences in the degree to which litigation impacted a state's disability benefits growth trajectory by *Olmstead* response type, both immediately and for subsequent years after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type.

The Ninth Circuit as well as the DOJ had significant results, but each only for the jump. In the model for the Ninth Circuit, the pre-litigation slope was 0.15 ($t(9) = 7.772$, $p < .001$), meaning that prior to litigation, all states on average were increasing the percentage of people receiving disability benefits by .15% per year. After litigation, states outside the Ninth Circuit significantly deviated from this trajectory by slowing their rate of increase ($\beta_{20} = -0.063$, $t(8) = -2.653$, $p = .029$), while the Ninth Circuit states did not significantly deviate from their pre-litigation trajectory. However, the Ninth Circuit did experience a jump *down* in their disability benefit recipient rate in the year immediately following litigation, by .278%. On average, the other states did not have a jump ($\beta_{30} = 0.131$, $t(8) = 1.677$, $p = .132$).

In the model for the DOJ, the pre-litigation slope was 0.14 ($t(9) = 7.569$, $p < .001$), meaning that prior to litigation, all states on average were increasing the percentage of people receiving disability benefits by .14% per year. After litigation, states with a DOJ settlement agreement deviated from this trajectory by slowing their rate of increase, almost significantly. The other states, on average, did not have a change in slope ($t(8) = -0.819$, $p = .437$). However, DOJ states did experience a jump up in their disability benefit recipient rate in the year immediately following litigation, by .26%. On average, the other states did not have a jump ($\beta_{30} = -0.048$, $t(8) = -0.705$, $p = .501$).

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). Interestingly, when controlling for the Ninth Circuit's immediate decrease in disability benefits recipients, the DOJ's immediate increase became insignificant ($t(7) = 1.218$, $p = .263$), indicating that while the DOJ may have had a significant effect on the outcome in its own model, its independent contribution was no longer significant when controlling for the changes in the Ninth Circuit. Therefore, the DOJ jump was eliminated from the model for parsimony. There remained significant variation between states in their disability rates in 2015 ($\chi^2(6) = 223.633$, $p < .001$), average rate of increase pre-litigation ($\chi^2(6) = 311.813$, $p < .001$), average rate of increase post-litigation ($\chi^2(6) = 20.151$, $p = .003$), and average sharp change immediately post-litigation ($\chi^2(5) = 25.993$, $p < .001$), encouraging consideration of additional factors. A total of 98% of the Level 1 variance was explained by the final model ($\sigma^2 = .00783$). See Table 23 for more details.

Model 4Aii

For the first stage of model building, the random intercept only model of the filing rate for SSA disability benefits provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean rate of people filing for disability benefits over time ($\chi^2(9) = 20.648$, $p < .001$), which was 1.19. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in disability filing rates attributable to between state differences, as opposed to within state differences) was .621 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2015 (most recent year data are available). Time was a significant predictor of change in disability benefit rates, such that on average across states, each year brought an increase in filing rate for disability benefits of .015 ($t(139) = 6.727$, $p < .001$), with the average in 2015 being 1.299. In the random intercept only model, the Level 1 variance (σ^2) was 0.01952, which was reduced to .01475 by the addition of time to the model, indicating time explains 24% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 39.212$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 41.1$, $p < .001$), indicating states did not experience a change in filing rates for disability benefits over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 14.923$, $p < .001$). The Level 1 variance was reduced by an additional 14% ($\sigma^2 = .01207$).

To examine potential differences in change over time by *Olmstead* response type,

each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results, although the Ninth Circuit and the Third Circuit approached significant differences in the filing rates of their respective states in 2015. See table 24 for additional details on these analyses. Disability benefits filing rate over time is shown graphically in Figure 9.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope. In the new model, on average across all ten states, every year prior to litigation brought an increase of .025 in the disability benefits filing rate ($t(9) = 3.845$, $p = .004$), and the post-litigation time period did significantly slow from that pace by .0167 units ($t(129) = -2.087$, $p = .039$), for an average in 2015 of 1.28. The Level 1 variance was reduced by an additional 3% ($\sigma^2 = .01152$), and a nested model comparison did show significant improvement ($\chi^2(1) = 3.997$, $p = .043$).

However, when the post-litigation slope was allowed to vary randomly by state, it became insignificant ($t(9) = -1.343$, $p = .212$). While there was significant variation in the post-litigation slope ($\chi^2(6) = 15.681$, $p = .016$), a nested model comparison was not significant ($\chi^2(3) = 3.876$, $p = .274$). When the chi-square statistics conflict, it is best practice to defer to the results of the chi-square difference test contained in the nested

model comparison (Singer & Willett, 2003); therefore, the post-litigation slope will not be allowed to vary. Similarly, the jump was significant on average ($t(128) = -2.291$, $p = .024$), and showed significant variation ($\chi^2(9) = 17.005$, $p = .048$), but a nested model comparison was not significant ($\chi^2(3) = 1.815$, $p > .500$).

To examine potential differences in the degree to which litigation impacted a state's filing rate for disability benefits by *Olmstead* response type, both immediately and for subsequent years after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type.

The Third Circuit had significant results, but only for the jump. The pre-litigation slope was 0.028 ($t(9) = 4.912$, $p < .001$), meaning that prior to litigation, all states on average saw increases in people filing for disability benefits by .028% per year. After litigation, states outside the Third Circuit slowed from this pace to .014% increases each year, a change that was almost significant ($t(126) = -1.9$, $p = .06$), while the Third Circuit slowed less than the other states, to a pace of .02% increases each year. Additionally, while most states also experienced a jump down in disability filing rates ($\beta_{30} = -0.091$, $t(126) = -2.794$, $p = .006$), the Third Circuit actually had a significant jump up ($\beta_{31} = 0.249$, $t(126) = 2.376$, $p = .019$). See table 25 for additional details on these analyses.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). The results remained substantially the same: while the majority of states slowed their rate of increase after litigation, the Third Circuit had a significant increase immediately after litigation. There

remained significant variation between states in their disability rates in 2015 ($\chi^2(9) = 141.216$, $p < .001$) and average rate of change over time ($\chi^2(9) = 34.011$, $p < .001$), encouraging consideration of additional factors. A total of 42% of the Level 1 variance was explained by the final model ($\sigma^2 = 0.01138$). See Table 26 for more details.

Model 4Aiii

For the first stage of model building, the random intercept only model of the percentage of the approval rate of SSA disability benefits applications provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean percentage of people being approved for SSA disability benefits over time ($\chi^2(9) = 391.357$, $p < .001$), which was 36.55%. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in disability approval rates attributable to between state differences, as opposed to within state differences) was .718 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2015 (most recent year data are available). Time was a significant predictor of change in disability benefits approval rates, such that on average across states, each year brought a decrease of .82% of disability applicants being approved ($t(139) = -15.22$, $p < .001$), with the average in 2015 being 30.84%. In the random intercept only model, the Level 1 variance (σ^2) was 21.37287, which was reduced to 8.05132 by the addition of time to the model, indicating time explains 62% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 136.68$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 146.862$, $p < .001$), indicating states did not experience a change in approval rates for disability benefits over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 75.478$, $p < .001$). The Level 1 variance was reduced by an additional 19% ($\sigma^2 = .01407$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See table 27 for additional details. Disability benefits application approval rates over time are shown in Figure 10.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope. In the new model, on average across all ten states, every year prior to litigation brought an decrease of .985% in the percentage of approved disability benefits applications ($t(9) = -5.429$, $p < .001$), and the post-litigation time period was not associated with a significant difference in that trend ($t(129) = 1.518$, $p = .131$), for an average in 2015 of 31.15%. The Level 1 variance was only slightly reduced to .3.995 (less than 1% change), and a nested model comparison did not show significant

improvement ($\chi^2(1) = 2.199$, $p = .134$). This indicates that on average, states did not change their trajectory of disability benefits approval rates after litigation.

When the post-litigation slope was allowed to vary randomly by state, it not only remained insignificant ($t(9) = -0.852$, $p = .416$), but did not show significant variation ($\chi^2(6) = 10.962$, $p < .089$), or survive a nested model comparison ($\chi^2(3) = 4.8$, $p = .186$). Therefore, the post-litigation slope will not be allowed to vary.

The jump was a non-significant addition to the model, on average ($t(128) = -0.747$, $p = .456$), and when allowed to vary randomly it remained insignificant ($\beta_{30} = -.731$, $t(9) = -8.23$, $p = .432$); however, the jump did show significant variation by state ($\chi^2(9) = 21.774$, $p = .01$) and a significant nested model comparison to the model with a fixed effect for jump ($\chi^2(3) = 9.319$, $p = .025$). Additionally, the addition of the jump changed the fixed effects for the other parameters such that, on average across states, the pre-litigation slope was now an annual decrease of -1.028 ($t(9) = -7.722$, $p < .001$), the post-litigation slope was an annual increase of .431 ($t(119) = 2.767$, $p = .007$), for an approval rating of 32.1% in 2015.

To examine potential differences in the degree to which litigation impacted a state's approval rate for disability benefits by *Olmstead* response type, both immediately and for subsequent years after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results although the Third Circuit approached a significant immediate decrease in disability

application approval rates immediately after litigation (β_{31}= -5.46, $t(8) = -7.183$, $p <$ .001). See Table 28 for more details.

The final model was ultimately the one described above, although it was run again with restricted maximum likelihood because it is the better estimator for small samples (Peugh, 2010). There remained significant variation between states in their disability application approval rates in 2015 ($\chi^2(9) = 162.824$, $p < .001$), average rate of change pre-litigation ($\chi^2(9) = 55.972$, $p < .001$), and average sharp change immediately post-litigation ($\chi^2(9) = 21.759$, $p = .01$), encouraging consideration of additional factors. A total of 83% of the Level 1 variance was explained by the final model (σ^2 = 3.67375). See Table 29 for more details.

Model 4B

For the first stage of model building, the random intercept only model of the suicide rate (occurrences per 100,000 members of the state population) provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean suicide rate over time ($\chi^2(9) = 258.34$, $p < .001$), which was 12.03. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in suicide rates attributable to between state differences, as opposed to change within states) was .58 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2016 (most recent year data are available). Time was a significant predictor of change in the suicide rate, such that on average across states, each year brought an increase of .19 in the suicide rate ($t(169) =$

15.215, $p < .001$), with the rate in 2016 being 13.65. In the random intercept only model, the Level 1 variance (σ^2) was 1.80092, which was reduced to 0.76254 by the addition of time to the model, indicating time explains 58% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 146.096$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 76.592$, $p < .001$), indicating state suicide rates did not change over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 37.067$, $p < .001$). The Level 1 variance was reduced by an additional 12% ($\sigma^2 = .01407$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See Table 30 for additional details on these analyses. Suicide rates over time are shown graphically in Figure 11.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope.

In the new model, on average across all ten states, the pre-litigation slope was no longer significant ($\beta_{10} = .079$, $t(9) = 1.56$, $p = .153$), but the post litigation slope was ($\beta_{20} =$

.214, $t(159) = 4.142$, $p < .001$), resulting in a 2016 average of 13.96. The Level 1 variance was reduced by 3% to 0.47972, and a nested model comparison showed significant improvement ($\chi^2(1) = 12.51$, $p < .001$). This indicates that on average, states did not have a significant rate of change prior to litigation, but there was a significant increase each year after litigation.

The post-litigation slope did not vary randomly by state ($\chi^2(9) = 15.061$, $p = .089$), or significantly improve the fit of the model when allowed to vary ($\chi^2(3) = 0.941$, $p > .5$). However, the jump, while insignificant on average ($\beta_{30} = .239$, $t(158) = .825$, $p = .411$), did vary significantly ($\chi^2(9) = 32.516$, $p < .001$). A nested comparison test also supported allowing the jump to vary ($\chi^2(3) = 12.036$, $p = .008$). Therefore, the post-litigation slope will be modeled as fixed while the jump will be modeled as varying randomly.

To examine potential differences in the degree to which litigation impacted a state's suicide rate by *Olmstead* response type, both immediately and for subsequent years after litigation, each approach was tested for a significant impact on the post-litigation jump. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. Florida, DOJ, and Minnesota had significant results.

In the model for the DOJ, the pre-litigation slope was 0.118 ($t(9) = 20.546$, $p < .001$), meaning that prior to litigation, all states on average were increasing in their suicide rate by .118 instances per year per 100,000 members of their population. After litigation, this rate of increase was hastened by .103, for an annual increase of .221 each year ($t(149) = 2.339$, $p = .021$). While there was not a change immediately after litigation

on average for states (β_{30}= -0.387, t(8) = -1.495, p = .173), there was a significant jump for DOJ states (See Table 31). Minnesota had the opposite pattern of results. The pre-litigation slope was not significant (β_{10}= 0.074, t(9) = 1.807, p = .104). After litigation, there was a significant increase of .196 on average annually for states (t(149) = 5.128, p < .001). While there was not an increase immediately after litigation on average for states (β_{30}= 0.433, t(8) = 1.397, p = .200), there was a significant jump down for Minnesota. Florida's slope also showed a significant slowing of the suicide rate growth. See table 31 for additional details.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). Interestingly, when controlling for the DOJ's immediate increase in the suicide rate, Minnesota's immediate increase became insignificant (t(7) = -.826, p =.436), indicating that while Minnesota may have had a significant effect on the outcome in its own model, its independent contribution was no longer significant when controlling for the changes in the DOJ states.

States on average, prior to litigation, had an increase each year of .126 (t(7) = -.352, p =.662). After litigation, for states other than Florida, this annual rate of change more than doubled, to .257 (β = 0.131, t(148) = 2.862, p = .005). In Florida, however, the annual rate of increase slowed to .07 (β = -.187, t(148) = -3.528, p < .001). On average, non-DOJ states did not have an immediate change after litigation significantly above and beyond what would be expected given the average annual increases (β = -.341, t(7) = -0.979, p = .36). DOJ states, on the other hand, had an immediate increase of 1.639, beyond their average annual increase (t(7) = 2.966, p = .021), which is a truly

remarkable jump given that most of the annual variations are less than a tenth of that jump. The average annual suicide rate in 2015 was 13.778 ($t(9) = 18.967$, $p < .001$). There remained significant variation between states in their suicide rates in 2015 ($\chi^2(9) = 106.756$, $p < .001$) and average rate of increase pre-litigation ($\chi^2(9) = 61.106$, $p < .001$), but not in the average change immediately post-litigation ($\chi^2(7) = 12.697$, $p = .079$), encouraging consideration of additional factors for all but the latter. A total of 77% of the Level 1 variance was explained by the final model ($\sigma^2 = 0.41965$). See Table 32 for more details.

Model 4C

Model 4C's dependent variable, readmission to any psychiatric hospital within thirty days of discharge from the state hospital, was missing 50% of its data. The model was not estimated.

Model 4D

For the first stage of model building, the random intercept only model of the percentage of employed SMHA clients provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean employment rate over time ($\chi^2(9) = 250.157$, $p < .001$), which was 18.41. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in disability benefit rates attributable to between state differences, as opposed to within state differences) was .69 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2017 (most recent year data are available). Time was a significant predictor of change in employment rates, such that on average across states, each year brought an increase of .295% in the employment rate on average across states ($t(169) = 15.215$, $p < .001$), with the rate in 2017 being 20.05%. In the random intercept only model, the Level 1 variance (σ^2) was 22.00469, which was reduced to 21.07152 by the addition of time to the model, indicating time explains 4% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of time, ($\chi^2(1) = 4.259$, $p = .037$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 38.53$, $p < .001$), indicating state employment rates did not change over time at the same pace. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 11.731$, $p = .003$). The Level 1 variance was reduced by an additional 22% ($\sigma^2 = 16.27390$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. Minnesota and the DOJ both had significantly different slopes from the other states. In the model for the DOJ states, while on average other states' employment rates grew slowly over time ($\beta_{10} = .756$, $t(8) = 3.617$, $p = .007$), the DOJ states' employment rate actually declined. In the model for Minnesota, the other states

on average had no significant change (β_{10}= .116, $t(8) = .624$, $p = .55$) while Minnesota's employment rate grew quickly. See table 33 for additional details on these analyses. Employment rates over time are shown graphically in Figure 12.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope.

In the new model, on average across all ten states, the pre-litigation slope was no longer significant (β_{10}= .319, $t(9) = 1.192$, $p = .264$), and neither was the post litigation slope (β_{20}= -.35, $t(86) = -0.195$, $p = .846$), resulting in a 2017 average of 20.54%. The Level 1 variance was not reduced, and a nested model comparison did not show significant improvement ($\chi^2(1) = .02783$, $p > .5$). This indicates that on average, states did not have a significant rate of change prior to litigation, and litigation did not significantly change the trajectory of states on average.

When the post-litigation slope was allowed to vary randomly by state, it remained insignificant ($t(9) = -0.685$, $p = .511$). While there was significant variation in the post-litigation slope ($\chi^2(4) = 10.789$, $p = .029$), a nested model comparison was not significant ($\chi^2(3) = 3.876$, $p = .274$). When the chi-square statistics conflict, it is best practice to defer to the results of the chi-square difference test contained in the nested model comparison (Singer & Willett, 2003); therefore, the post-litigation slope will not be allowed to vary.

However, the jump was significant on average, (β_{20}= 2.632, $t(76) = 5.014$, $p <$ .001), showed significant variation by state ($\chi^2(4) = 28.425$, $p < .0001$), and had a significant nested model comparison ($\chi^2(4) = 619.236$, $p = .031$). To examine potential differences in the degree to which litigation immediately impacted a state's employment rate by *Olmstead* response type, each approach was tested for a significant impact on the post-litigation slope and jump. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type.

In the model for the DOJ, the pre-litigation slope was -1.392 ($t(9) = -2.664$, $p =$ .026), meaning that prior to litigation, all states on average were decreasing in their employment rate by 1.39% per year. After litigation, this rate of decrease was not significantly changed (β_{30}= 2.402, $t(75) = 1.061$, $p = .292$). There was an immediate increase after litigation on average for states (β_{20}= -2.452, $t(8) = 3.72$, $p = .006$); however, this jump was significantly smaller for DOJ states (See Table 34). Minnesota had the opposite results. The pre-litigation slope was still significantly decreasing (β_{10}= -1.687, $t(9) = 1.807$, $p = .104$). After litigation, there was an immediate significant increase of 2.318 on average for states ($t(8) = 4.091$, $p = .003$), which was even larger in Minnesota (See Table 34). The post-litigation slope did not significantly deviate from the pre-litigation slope (β_{30} = -.219, $t(75) = -.141$, $p = .888$).

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). Interestingly, when controlling for Minnesota's immediate increase in the employment rate, DOJ's states immediate decrease fell just shy of significance, indicating that while DOJ may have had

a significant effect on the outcome in its own model, its unique contribution not significant after accounting for the changes in Minnesota. There remained significant variation between states in their employment rates in 2017 ($\chi^2(4) = 124.337$, $p < .001$), average rate of change pre-litigation ($\chi^2(4) = 12.404$, $p = .015$), as well as in the average change immediately post-litigation ($\chi^2(2) = 13.3$, $p = .002$), encouraging consideration of additional factors. A total of 46% of the Level 1 variance was explained by the final model ($\sigma^2 = 11.92855$). See Table 35 for more details.

Models 4Ei-4Eiii

Models 4Ei, 4Eii, and 4Eiii all looked at components of state budgets, specifically, the per capita spending rates for the judiciary, law enforcement, and corrections. Across all states and years, the dependent variables were significantly correlated with each other ($p < .001$ for all; see Table 36).

Model 4Ei

For the first stage of model building, the random intercept only model of judicial spending trends provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean per capita rate of judicial spending over time ($\chi^2(9) = 395.221$, $p < .001$), which was $115.96. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in judicial spending trends attributable to between state differences, as opposed to within state differences) was .682 (Davis & Scott, 1995).

Before adding the fixed effect of time, the per capita spending rate of the entire state budget will be added into the model. Variations like inflation, state budget shortfalls, or the general health of the state's economy will have a less misleading impact on the interpretation of the dependent variable if the model accounts for the overall state budget. For reference, on average across states, the total state budget per capita rate grew by \$292.79 per year ($t(169) = 43.006$, $p < .001$) for a total of \$10729.29 in 2015. The state budget was entered group-mean centered, to reduce issues with multicollinearity and model convergence. The overall state budget per capita rate was a significant predictor of the state judicial budget per capita rate, so that for every dollar increase in the state budget, the judicial budget increased 1.2 cents ($t(169) = 27.033$, $p < .001$). In the random intercept only model, the Level 1 variance (σ^2) was 635.75607, which was reduced to 119.98522 by the addition of the state budget to the model, indicating the variation in the state budget explains 81% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of the state budget, ($\chi^2(1) = 283.466$, $p < .001$). The research question primarily centers on examining variance in the rate of judicial spending as compared to the total state budget (i.e., does it grow at the same rate?), as opposed to variance in the relationship between judicial spending and the total state budget (i.e., for every dollar increase in the state budget, how much does judicial spending change?); therefore, the slope for the total state budget was modeled only as a fixed effect to preserve parsimony and avoid model convergence issues.

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2015 (most recent year data are available). As the state budget is already in the model, the interpretation of the time

coefficient changes from change over time to the unique pattern of change over time of the judicial state budget, after controlling for the total state budget. In 2015, for every dollar increase in the total state budget, the judicial budget increased only 1.6 cents ($t(168) = 10.377$, $p < .001$). On average, the judicial budget grew at a significantly slower rate than the state total budget ($\boldsymbol{\beta}_{10} = -1.17$, $t(168) = -2.519$, $p = .013$). The Level 1 variance was only slightly reduced to 115.66921, and a nested model comparison supported the inclusion of time, ($\chi^2(1) = 6.228$, $p = .012$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 92.211$, $p < .001$), indicating states did not change their judicial budgets over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 43.304$, $p < .001$). The Level 1 variance was reduced by an additional 6% ($\sigma^2 = .01407$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See table 37 for additional details on these analyses. The state judicial budget over time is shown graphically in Figure 13.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the unique rate of change for the judicial budget across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope

represents any deviation from the pre-litigation slope, again, only for the judicial budget's unique effect after controlling for the total state budget. In the new model, on average across all ten states, for every dollar increase in the total state budget, the judicial budget increased 1 cent. Controlling for the post-litigation period, the pre-litigation judicial budget did not grow at a rate significantly different from the total state budget (β_{10}= 1.26, $t(9) = 1.757$, $p = .113$). However, the post-litigation period showed a significant slowing of growth in the judicial state budget (β_{20}= -1.985, $t(158) = -3.755$, $p < .001$). The Level 1 variance was only slightly reduced by 1% to 73.46324, and a nested model comparison showed significant improvement ($\chi^2(1) = 12.58$, $p < .001$). This indicates that on average, states grew their judicial state budget at the same rate as their general budget, until litigation, at which point it significantly slowed.

When the post-litigation slope was allowed to vary randomly by state, the post-litigation slope became insignificant ($t(9) = -1.394$, $p = .197$), but there was significant variation ($\chi^2(9) = 80.856$, $p < .001$), indicating states vary in the degree to which litigation impacted their judiciary budget growth trajectory. A nested model comparison was significant ($\chi^2(3) = 49.358$, $p < .001$). The Level 1 variance was reduced by an additional 3% ($\sigma^2 = 51.72998$). Similarly, the "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in judicial budget the year after litigation was significant on average ($t(148) = 2.5$, $p = .014$), not significant when allowed to vary randomly, ($t(9) = .914$, $p = .384$), but showed significant variation by state ($\chi^2(9) = 25.836$, $p = .003$) with a significant nested model comparison for adding both the jump fixed effect ($\chi^2(1) = 5.992$, $p = .014$) and variance component ($\chi^2(4) = 23.672$, $p < .001$).

To examine potential differences in the degree to which litigation impacted a state's judicial budget growth trajectory by *Olmstead* response type, both immediately and for subsequent years after litigation, each approach was tested for a significant impact on the post-litigation jump and deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results, although Florida and Minnesota trended towards significance on their post-litigation deviation and jump, respectively.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). There remained significant variation between states in their judicial budget per capita rate in 2015 ($\chi^2(9) = 78.653$, $p < .001$), average rate of increase pre-litigation ($\chi^2(9) = 137.133$, $p < .001$), average rate of increase post-litigation ($\chi^2(9) = 93.928$, $p < .001$), and average sharp change immediately post-litigation ($\chi^2(9) = 25.813$, $p = .003$), encouraging consideration of additional factors. A total of 93% of the Level 1 variance was explained by the final model ($\sigma^2 = 44.04746$). See Table 39 for more details.

Model 4Eii

For the first stage of model building, the random intercept only model of police spending trends provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean per capita rate of police spending over time ($\chi^2(9) = 110.404$, $p < .001$), which was $253.95. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in police spending trends

attributable to between state differences, as opposed to within state differences) was .358 (Davis & Scott, 1995).

Before adding the fixed effect of time, the per capita spending rate of the entire state budget will be added into the model. Variations like inflation, state budget shortfalls, or the general health of the state's economy will have a less misleading impact on the interpretation of the dependent variable if the model accounts for the overall state budget. For reference, on average across states, the total state budget per capita rate grew by \$292.79 per year ($t(169) = 43.006$, $p < .001$) for a total of \$10729.29 in 2015. The state budget was entered group-mean centered, to reduce issues with multicollinearity and model convergence. The overall state budget per capita rate was a significant predictor of the police budget per capita rate, so that for every dollar increase in the state budget, the police budget increased 3.2 cents ($t(169) = 40.512$, $p < .001$).

In the random intercept only model, the Level 1 variance (σ^2) was 2022.797199, which was reduced to 365.22496 by the addition of the state budget to the model, indicating the variation in the state budget explains 91% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of the state budget, ($\chi^2(1) = 402.212$, $p < .001$). The research question primarily centers on examining variance in the rate of police spending as compared to the total state budget (i.e., does it grow at the same rate?), as opposed to variance in the relationship between judicial spending and the total state budget (i.e., for every dollar increase in the state budget, how much does police spending change?); therefore, the slope for the total state budget was modeled only as a fixed effect to preserve parsimony and avoid model convergence issues.

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2015 (most recent year data are available). As the state budget is already in the model, the interpretation of the time coefficient changes from change over time to the unique pattern of change over time of the police budget, after controlling for the total state budget. In 2015, for every dollar increase in the total state budget, the police budget increased only 2 cents ($t(168) = 7.783$, $p < .001$). However, over time, the police budget grew faster than the state budget ($\gamma_{10} = 3.85$, $t(168) = 7.783$, $p < .001$). The Level 1 variance was reduced to 34.57509, so that 92% of the variance at Level 1 was explained. A nested model comparison supported the inclusion of time, ($\chi^2(1) = 23.129$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 187.068$, $p < .001$), indicating states did not change their judicial budgets over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 93953$, $p < .001$). The Level 1 variance was reduced by an additional 4% ($\sigma^2 = .01407$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See table 40 for additional details on these analyses. The state police budget over time is shown graphically in Figure 14.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it

now no longer represents the unique rate of change for the police budget across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope, again, only for the police budget's unique effect after controlling for the total state budget.

In the new model, on average across all ten states, for every dollar increase in the total state budget, the police budget increased 2.1 cents ($t(158) = 8.241$, $p < .001$). Controlling for the post-litigation period, the pre-litigation police budget grew significantly over time, beyond what would be expected based on the total state budget ($\beta_{10} = 3.795$, $t(9) = 3.378$, $p = .008$). The post-litigation did not significantly deviate from the pre-litigation trend ($\beta_{20} = -.726$, $t(158) = -.885$, $p = .377$); essentially, on average across the states, the police budget continued to grow faster than the state budget after litigation, much as it did prior to litigation. Unsurprisingly, the Level 1 variance was not reduced, and a nested model comparison did not show significant improvement ($\chi^2(1) = .643$, $p > .5$). An additional nested model comparison did not support allowing the post-litigation slope to vary randomly ($\chi^2(3) = 7.534$, $p = .056$).

However, the "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in police budget the year after litigation was not significant on average ($t(157) = .917$, $p = .361$), not significant when allowed to vary randomly, ($t(9) = .515$, $p = .619$), but showed significant variation by state ($\chi^2(9) = 59.282$, $p < .001$) with a significant nested model comparison for allowing the jump to vary randomly ($\chi^2(3) = 26.388$, $p < .001$). These results indicate that while there may not be evidence for a jump for all states on average, the degree to which states experience a

jump after litigation varies, so some states may have an effect while others may not.

To examine potential differences in the degree to which litigation impacted a state's police budget growth trajectory, both immediately and for the subsequent years, by *Olmstead* response type, each approach was tested for a significant impact on the post-litigation slope and jump. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See table 41 for more details on these analyses.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). There remained significant variation between states in their per capita spending on police in 2015 ($\chi^2(9) = 285.756$, $p < .001$), average rate of increase pre-litigation ($\chi^2(9) = 81.044$, $p < .001$), and average sharp change immediately post-litigation ($\chi^2(9) = 58.647$, $p < .001$), encouraging consideration of additional factors. A total of 97% of the Level 1 variance was explained by the final model ($\sigma^2 = 120.90089$). See Table 42 for more details.

Model 4Eiii

For the first stage of model building, the random intercept only model of correctional spending trends provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean per capita rate of correctional spending over time ($\chi^2(9) = 282.75$, $p < .001$), which was $210.28. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in correctional spending attributable to between state differences, as opposed within state

differences) was .602 (Davis & Scott, 1995).

Before adding the fixed effect of time, the per capita spending rate of the entire state budget will be added into the model. Variations like inflation, state budget shortfalls, or the general health of the state's economy will have a less misleading impact on the interpretation of the dependent variable if the model accounts for the overall state budget. For reference, on average across states, the total state budget per capita rate grew by $292.79 per year ($t(169) = 43.006$, $p < .001$) for a total of $10729.29 in 2015. The state budget was entered group-mean centered, to reduce issues with multicollinearity and model convergence. The overall state budget per capita rate was a significant predictor of the state correctional budget per capita rate, so that, on average across all states and years, for every dollar increase in the state budget, the correctional budget increased 2 cents ($t(169) = 26.196$, $p < .001$).

In the random intercept only model, the Level 1 variance (σ^2) was 1821.66094, which was reduced to 361.67827 by the addition of the state budget to the model, indicating the variation in the state budget explains 80% of the variance at Level 1. Additionally, a nested model comparison supported the inclusion of the state budget, ($\chi^2(1) = 274.847$, $p < .001$). The research question primarily centers on examining variance in the rate of judicial spending as compared to the total state budget (i.e., does it grow at the same rate?), as opposed to variance in the relationship between judicial spending and the total state budget (i.e., for every dollar increase in the state budget, how much does judicial spending change?); therefore, the slope for the total state budget was modeled only as a fixed effect to preserve parsimony and avoid model convergence issues.

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2015 (most recent year data are available). As the state budget is already in the model, the interpretation of the time coefficient changes from change over time to the unique pattern of change over time of the correctional state budget, after controlling for the total state budget. In 2015, for every dollar increase in the total state budget, the correctional budget increased only 3.4 cents ($t(168) = 13.52$, $p < .001$). The correctional budget grew at a slower rate than the state budget ($\beta_{10} = -4.19$, $t(168) = -5.524$, $p < .001$). The Level 1 variance was reduced by 3% to 306.63081, and a nested model comparison supported the inclusion of time, ($\chi^2(1) = 28.069$, $p < .001$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 60.351$, $p < .001$), indicating states did not change their correctional budgets over time at the same rates. A nested model comparison also supported allowing the slope of time to vary randomly across states ($\chi^2(2) = 26.093$, $p < .001$). The Level 1 variance was reduced by an additional 4% ($\sigma^2 = .01407$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. There were no significant results. See table 43 for additional details on these analyses. State per capita correctional spending over time is shown graphically in Figure 15.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it now no longer represents the unique rate of change for the correctional budget across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope, again, only for the correctional budget's unique effect after controlling for the total state budget.

In the new model, on average across all ten states, for every dollar increase in the total state budget, the correctional budget increased 2.4 cents. Controlling for the post-litigation period, the pre-litigation correctional budget did not grow at a rate significantly different from the total state budget (β_{10}= .29, $t(9) = .237$, $p = .818$). However, the post-litigation period showed a significant slowing of growth in the correctional state budget (β_{20}= -4.057, $t(158) = -4.674$, $p < .001$). The Level 1 variance was only slightly reduced by 1% to 212.95413, and a nested model comparison showed significant improvement ($\chi^2(1) = 16.352$, $p < .001$). This indicates that on average, states grew their correctional state budget at the same rate as their general budget, until litigation, at which point it significantly slowed.

The post-litigation slope did not vary significant ($\chi^2(9) = 6.476$, $p > .5$), and did not significantly improve the model when varying, therefore it will be modeled as fixed ($\chi^2(3) = .862$, $p > .5$). However, while the "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in correctional budget the year after litigation was not significant on average ($t(157) = 1.42$, $p = .157$), not significant when allowed to vary randomly, ($t(9) = .978$, $p = .354$), it did show

significant variation by state ($\chi^2(9) = 27.205$, $p = .002$) with a significant nested model comparison ($\chi^2(3) = 15.131$, $p = .002$) .

To examine potential differences in the degree to which litigation impacted a state's correctional budget growth trajectory, both immediately and over subsequent years, by *Olmstead* response type, each approach was tested for a significant impact on the post-litigation slope and jump. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type.

The Ninth Circuit had a significant jump upwards in its per capita funding for corrections immediately after litigation. The pre-litigation slope remained insignificant, indicating the correctional budget did not grow beyond what would be expected given the growth of the total state budget ($\beta_{10} = -.309$, $t(9) = -.302$, $p = .769$). The post-litigation slope showed significant stagnation, and was actually decreasing each year, after controlling for the total state budget ($\beta_{20} = -3.021$, $t(147) = -3.607$, $p < .001$). Other states on average did not have a significant change immediately post-litigation ($\beta_{30} = -5.524$, $t(8) = -1.123$, $p = .294$). Every dollar increase in the total state budget brought a 2.3 cent increase in the correctional budget ($t(147) = .023$, $p < .001$).

In the model for the Third Circuit, prior to litigation, the correctional budget was not growing significantly, beyond what would be expected given the growth of the total state budget ($\beta_{10} = .232$, $t(9) = .231$, $p = .823$). After litigation, states other than Pennsylvania, on average, were decreasing their correctional budget every year, after controlling for the total state budget ($\beta_{20} = -4.052$, $t(147) = -6.259$, $p < .001$). Pennsylvania was significantly different from the other states by decreasing their

correctional budget less than other states each year, after controlling for the total state budget (β_{21} = 2.212, $t(147)$ = 2.072, p = .04). Neither Pennsylvania (β_{31} = 1.395, $t(8)$ = .058, p = .956) nor the other states had an immediate change after litigation (β_{30} = 7.574, $t(8)$ = 1.045, p = .327). Every dollar increase in the total state budget brought a 2.1 cent increase in the correctional budget ($t(147)$ = 7.762, $p < .001$). See table 44 for additional details on theses analyses.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). There remained significant variation between states in their correctional budget per capita rate in 2015 ($\chi^2(9)$ = 243.914, $p < .001$) and average rate of increase pre-litigation ($\chi^2(9)$ = 21.992, p = .009), but not in the average sharp change immediately post-litigation ($\chi^2(8)$ = 3.875, $p >$ .5), encouraging consideration of additional factors for all but the latter. A total of 90% of the Level 1 variance was explained by the final model (σ^2 = 189.00418). See Table 45 for more details.

Model 4F

For the first stage of model building, the random intercept only model of the incarceration rate provided statistical support for using GCM. Specifically, there was significant variation by state (Level 2) in the mean rate of people incarcerated over time ($\chi^2(9)$ = 4150.99, $p < .001$), which was 4.05. Additionally, the Intraclass Correlation (ICC) for Level 2 (the proportion of the variance in disability benefit rates attributable to between state differences, as opposed to within state differences) was .952 (Davis & Scott, 1995).

Next, the fixed effect of time was added to the model. Time was added uncentered and coded so the intercept represents 2016 (most recent year data are available). Time was not a significant predictor of change in the incarceration rate when examining 1996-2016 ($\beta_{10} = .002$, $t(199) = .358$, $p = .721$). The average across states in 2016 was 4.06. The Level 1 variance (σ^2) from the random intercept only model (0.15131) was not reduced. Additionally, a nested model comparison showed the fixed effect of time did not significantly improve the fit of the model, ($\chi^2(1) = .12828$, $p > .5$).

The model was rerun with the effect of time allowed to vary randomly across the states, and there was significant variation ($\chi^2(9) = 221.74$, $p < .001$), indicating states did not change their incarceration rate over time in the same way. A nested model comparison showed allowing the effect of time to vary significantly improved the fit of the model, as compared to the model with the fixed effect of time ($\chi^2(2) = 115.415$, $p < .001$). The Level 1 variance was reduced by 51% ($\sigma^2 = 0.07345$).

To examine potential differences in change over time by *Olmstead* response type, each approach was tested for a significant impact on the intercept and slope across all years. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so value of 1 indicated engagement in that response type. The Ninth Circuit had the only significant result, with their incarceration rates growing slower than other states, ($\beta_{11} = .06$, $t(8) = -2.33$, $p = .048$). See table 46 for additional details on these analyses. The incarceration rate from 1996-2016 is shown graphically in Figure 16.

Next, the fixed effect of the post-litigation slope was added uncentered to the model. The addition of this variable changes the interpretation of the time variable, so it

now no longer represents the rate of change across all years in the model, but only up to the break point, which was coded separately for each state as the year of their *Olmstead* litigation. The new variable of the post-litigation slope represents any deviation from the pre-litigation slope. In the new model, on average across all ten states, every year prior to litigation brought an increase of .048 in the incarceration rate ($t(9) = 2.491$, $p = .034$), but the incarceration rate significantly slowed in the post-litigation period ($\beta_{20} = -.107$, $t(189) = -7.492$, $p < .001$). The Level 1 variance was reduced by 12% to 0.05583, and a nested model comparison showed significant improvement ($\chi^2(1) = 47.192$, $p < .001$).

When the post-litigation slope was allowed to vary randomly by state, it remained significant ($\beta_{20} = -.107$, $t(9) = -4.656$, $p = .001$) and significantly varied ($\chi^2(9) = 18.849$, $p = .026$), indicating states vary in the degree to which litigation impacted their incarceration rates. A nested model comparison was significant ($\chi^2(3) = 16.653$, $p < .001$). The Level 1 variance was reduced by an additional 3% ($\sigma^2 = 0.05172$). However, the "jump" (variation in linear change not adequately accounted for by the slope in the pre- or post-litigation phase) in incarceration rates the year after litigation was not significant on average ($t(179) = 1.665$, $p = .098$), and did not show significant variation by state ($\chi^2(9) = 14.127$, $p = .117$), and did not significantly improve the fit of the model when allowed to vary randomly ($\chi^2(4) = 1.218$, $p > .5$). The jump was subsequently not included in any future models.

To examine potential differences in the degree to which litigation impacted a state's incarceration rates by *Olmstead* response type, each approach was tested for a significant impact on the post-litigation deviation. Each response type binary variable was entered uncentered and examined individually in its own model; they were coded so

value of 1 indicated engagement in that response type. There were no significant results, although Florida and the Third Circuit approached significance; the Third Circuit's nested model comparison also approached significance ($\chi^2(9) = 14.127$, $p = .117$). See Table 47 for additional details.

Finally, all results were combined and restricted maximum likelihood was used because it is the better estimator for small samples (Peugh, 2010). The final model only involved a pre- and post-litigation slope. There remained significant variation between states in their incarceration rates in 2016 ($\chi^2(9) = 1064.129$, $p < .001$), average rate of increase pre-litigation ($\chi^2(9) = 47.017$, $p < .001$), and average rate of increase post-litigation ($\chi^2(9) = 18.716$, $p = .027$), encouraging consideration of additional factors. A total of 65% of the Level 1 variance was explained by the final model ($\sigma^2 = 0.05195$). See Table 48 for more details.

Hypothesis 5

Hypothesis 5 looked at the missing data from the other four hypotheses. For all four hypotheses, there was no missing data at Level 2 (the state level). Membership in each of the 5 *Olmstead* response types was individually coded as a binary Level 2 variable.

However, Level 1 (repeated measures) had multiple missing data points (see Table 49). For Hypothesis 1, no data were available for 2003 on any states, and Delaware (2001 & 2008), Florida (2005), Minnesota (2017), North Carolina (2004 & 2013), and New Hampshire (2004-2005) were all missing at least one year. For both models in Hypothesis 2, Florida had no reported expenditures in 2013 and five states

(California, Delaware, Florida, New Hampshire, and Pennsylvania) did not report expenditures for 2016 prior to these analyses.

In Hypothesis 3, no data were available for 2003 on any states, and California (2005-2006), Delaware (2001-2002 & 2008), Florida (2004-2005), Maryland (2001 & 2004), Minnesota (2006 & 2017), North Carolina (2004), New Hampshire (2002 & 2004-2006), and Pennsylvania (2005) were all missing data. For Hypothesis 4, only Models 4C, 4D, and 4Ei-4Eiii were missing data at Level 1; for 4C, 50% of the data were missing. California was missing all but 2010, Delaware was missing 2008, Florida was missing 2013-2017, Georgia had no data, Maryland was missing 2013-2017, Minnesota was missing 2014-2015, North Carolina was missing 2007-2008 and 2016-2017, New Hampshire had no data, Pennsylvania was missing 2012-2017, and Washington was missing no data.

For Model 4D, only three data points were missing: Delaware in 2008, and Pennsylvania in 2015 and 2016. For Models 4Ei-4Eiii, BJS reports for 2001 and 2003 were inexplicably missing the variables used for this analysis in both the PDFs and the spreadsheets. All missing data described here are summed in Table 50.

Total missing data for all analyses in the dissertation was 7.5%. Overall, Minnesota had the least missing data, followed by the Ninth Circuit states, the Third Circuit, the DOJ states, and Florida. Besides the dependent variable measuring readmission to any psychiatric hospital within thirty days of discharge from the state hospital, rates of mental health treatment in the community had the most missing data. Incarceration rates, suicide rates, and rates for disability benefits were reported perfectly for all states.

Summary of Results

All states showed trends of deinstitutionalization across time. For non-DOJ states, this trend slowed significantly after litigation, while DOJ states continued at the same pace. Meanwhile, only Minnesota showed an increase in the number of people receiving services in the community, and Minnesota's rate of growth actually slowed slightly after litigation.

On average over time, states grew their community mental health budget at the same rate as their general budget. This rate of growth remained the same after litigation, except for DOJ states which increased their spending faster than other states after litigation. States funded their state psychiatric hospitals at the same rates both before and after litigation, with no significant differences based on *Olmstead* response type.

The rate of people receiving disability benefits grew each year, but this rate of growth slowed after litigation. The Ninth Circuit states saw a significant decrease immediately after litigation and had a lower rate of people receiving disability benefits in 2015. The rate of people filing for disability benefits also increased each year, and this rate of growth also slowed after litigation. The Third Circuit had a significant jump up in the filing rate immediately after litigation. However, the approval rate for those filing for disability benefits was decreasing each year, although the rate of decline slowed after litigation.

Suicide rates on average were increasing over time, and the rate of growth doubled after litigation for states other than Florida. Florida, however, cut its suicide rate of growth in half after litigation. DOJ states saw a significant, immediate jump up in

their suicide rates after litigation, although this trend seems to be drive by New Hampshire alone.

For all states, the employment rates of consumers decreased each year, and this trend did not significantly change after litigation. However, immediately after litigation, there was a significant jump up in employment rates, which was smaller for DOJ states and larger for Minnesota. The incarceration rate for states was slowly growing prior to litigation, but then declined after litigation, with no significant differences between *Olmstead* response types.

On average, states grew their judicial budgets significantly slower than the overall state budget, but there were no significant differences between *Olmstead* response types or pre/post litigation. On average, states grew their police budget significantly faster than the overall state budget, but this rate of growth slowed after litigation. There were no significant differences between *Olmstead* response types. For the state correctional budget, prior to litigation, it grew at the same rate as the overall state budget, but after litigation, the rate of growth significantly slowed, so that the correctional budget was growing significantly slower than the overall state budget. The Third Circuit did not slow as much after litigation as the other states, and the Ninth Circuit had an immediate increase after litigation in correctional spending. See Table 48 for a summary of results.

DOJ states, the Third Circuit, and Florida had the highest rates of missing data across all variables, (8.2-8.6%) while Minnesota had the lowest rate of missing data (5.2%). The rates of disability applications, approvals, and beneficiaries, along with the suicide rate, had no missing data, while the readmission rate to any psychiatric hospital had the highest percentage of missing data at 50%. The present study had 7.5% missing

data overall.

CHAPTER 9: THE PRESENT STUDY: DISCUSSION OF FINDINGS

The discussion is divided into four parts: discussion of empirical results, legal analysis of *Olmstead* applications in light of the empirical results, limitations of the current study, and future directions for further research.

Empirical Results

Hypothesis 1. Hypothesis 1 examined changes in the hospitalization rate per thousand members of the general population for the state psychiatric hospital only. The original hypothesis was that most states, regardless of plan type, would be successful in reducing the institutionalized population in their state. This hypothesis was supported; on average, all states showed a trend of deinstitutionalization across all years.

When examining all states on average from 2001 to 2017, there was a significant, general trend of deinstitutionalization, resulting in fewer people in state psychiatric hospitals. Each year, the rate of hospitalization went down .032 instances per 1000 members of the state's general population. In 2017, the average across states was .276 hospitalizations in the state psychiatric hospital for every 1000 people.

Upon closer examination, this trend varied between pre- and post-litigation periods, and the DOJ states had significant deviations from the average post-litigation trend as well. When all states' effects were averaged together, there was a significantly faster rate of deinstitutionalization prior to litigation than after. The annual decrease went from .054 instances per 1000 to .022 instances per 1000. While considering these trends,

it is important to note that three states - Florida, Maryland (Ninth), and Pennsylvania (Third) – all had litigation in 2001, so they have only one data point in the pre-litigation phase of this data analysis.

Once DOJ's significant differences were accounted for in the model, other states on average had a decrease of .068 instances per year prior to litigation but slowed after litigation to an annual decrease of .011 instances. This change was just shy of significant. DOJ states, however did not slow at all, maintaining an annual decrease of .07 instances. The difference between DOJ's post-litigation pace and the other states' post-litigation pace was significant. The final model accounted for 80% of the variance in hospitalizations rates, indicating its explanatory power is remarkable.

Additionally, some states seem to have encountered a floor effect in the later years, as seen in Figure 3. Several states maintained a steady, low rate of hospitalizations beginning as early as 2001. This may have contributed to the significant slowing of deinstitutionalization on average post-litigation. This finding is consistent with a need to establish a baseline number of state psychiatric hospital beds to maintain in order to ensure a full continuum of care is available to those who may need it.

Overall, these findings are remarkable because they show a national trend of deinstitutionalization that was not quickened by *Olmstead* litigation. Rather, at best, DOJ states were able to continue the pace of pre-litigation while other states on average slowed. These findings call into question the assumptions of the courts that *Olmstead* litigation would improve the state's efforts at deinstitutionalization.

Hypothesis 2 - Model 2A. Model 2A examined changes in the per capita funding rate of community mental health treatment. The original hypothesis was that unless an *Olmstead* plan included specific requirements for increasing community-based treatment financial resources, such as required by the Ninth Circuit, community-based services will be funded the same or less, despite expected increases in their service population due to deinstitutionalization. This hypothesis was partially supported.

When examining all states on average in available years from 1997 to 2016, there was a significant, general trend of increased funding for community mental health treatment. Each year, states increased funding by $3.93. In 2016, the average across states was $119.78 spent on community mental health resources per member of the state population.

However, once the effect of the total state budget was included in the model, community mental health funding did not have a unique predictive effect, indicating that there was no change in community mental health funding above what would be expected based on the changes in the overall state budget. Pennsylvania (the Third Circuit) was significantly different from other states; over the years, it was increasing its spending by $7.35 more each year than other states, ending in 2016 with a per capita rate $188.57 more than the average of other states.

Once the model was split in pre- and post-litigation periods, DOJ states were the significant spenders, instead of Pennsylvania. After litigation, only DOJ states increased their spending significantly more rapidly than other states, by about $4 per year. However, Pennsylvania's differential increase in funding post-litigation only approached significance ($p = .08$). On average, other states' community mental health budgets grew

at the same rate as their general budget, and this did not vary significantly after litigation. The final model accounted for 86% of the variance in community mental health funding, indicating its explanatory power is remarkable.

Overall, this hypothesis was only partially supported because the Third Circuit did not bear out the hypothesis. Florida and the Third Circuit were the only response types to not require either an increase in funding or substantial community mental health resource development. Florida did not significantly deviate from the average state trend, which was increasing in step with the total state budget both before and after litigation. Therefore, Florida was not getting additional funding to their community treatment resources, despite the arguably expected increase in need for community treatment due to a continuing trend of deinstitutionalization. Conversely, Pennsylvania had significant spending increases over the entire observed time period, showing strong funding support for its community treatment resources, beyond what would be expected just from growth of the overall state budget. However, this trend existed before litigation, therefore, was not a product of it. A review of Figure 4 shows Pennsylvania clearly out spending other states, while Florida's line remains flat at the bottom of the graph.

Hypothesis 2 - Model 2B. Model 2B examined changes in the per capita funding rate for state psychiatric hospitals. When examining all states on average in available years from 1997 to 2016, there was a significant, general trend of increased funding for state psychiatric hospitals. Each year, states increased funding by 28 cents. In 2016, the average across states was $35.86 spent on state psychiatric hospitals per member of the

state population. On average across all years and states, for every dollar increase in the total state budget, the state psychiatric hospital budget increased .07 cents.

Once the total state budget and time were modeled together, neither had unique predictive utility for the state psychiatric hospital budget. As both were significant predictors independently, it is likely there was too much overlap between the two predictors for either of them to make a unique contribution. This is supported by the finding that including both predictors, with the slope for time allowed to vary randomly, reduced the residual variance and significantly improved the fit of the model, as indicated by a nested model comparison.

On average, states did not significantly change their state psychiatric hospital budget post-litigation, immediately or over time. However, both the Ninth Circuit and Minnesota had interesting differences from the other states. The Ninth Circuit had an immediate increase in funding the year after litigation, while Minnesota had an immediate drop. The final model accounted for 68% of the variance in state psychiatric hospital funding, indicating its explanatory power is quite high.

Of note, the Ninth Circuit cases all found in favor of the state, while most other cases resulted in a judgment against the state or a settlement agreement requiring substantial development of community resources to meet the requirements of *Olmstead*. It is possible that surviving a lawsuit increased confidence in the state psychiatric hospitals, thereby creating a protective effect on funding.

Additionally, Minnesota faced four additional years of negotiating a settlement agreement after litigation ended. Each settlement agreement rejected by the trial court over those years was rejected because it was too vague or did not meet the needs of

enough people. Minnesota may have dipped its funding of the state psychiatric hospital immediately after litigation in anticipation of needing funds for the community services its settlement agreement would ultimately require. Minnesota did increase its funding each year post-litigation by more than other states on average, but this difference fell just shy of significance.

Hypothesis 3. Model 3 examined changes in the rate of people receiving mental health treatment in the community. The original hypothesis was that the numbers served in the community would not show a significant increase, despite a significant deinstitutionalization trend, leaving open the possibility of transinstitutionalization or people with SMI otherwise not being adequately treated in the community. This hypothesis was supported. Overall, Minnesota was the only *Olmstead* response type to show significant growth in the rate of people receiving mental health services in the community, and this was primarily before their litigation.

On average from 2001 to 2017, states were increasing the occurrence of community mental health treatment by .436 instances per 1000 people, with a 2017 average of approximately 18 per 1000 receiving mental health services in the community. However, this growth trend seemed to be driven by Minnesota. Minnesota alone was increasing its community treatment numbers by 1.31 instances per 1000 people each year; after parsing out Minnesota's effect, the other states on average did not show a significant annual increase.

Dividing the model into pre- and post-litigation periods revealed that on average, states increased people receiving community services by .633 instances per 1000 per year

prior to litigation, and this rate slowed, but not significantly, after litigation. While considering these trends, it is important to note that three states - Florida, Maryland (Ninth), and Pennsylvania (Third) - all had litigation in 2001, so they have only one data point in the pre-litigation phase of this data analysis. Again however, after untangling Minnesota's effect, the other states did not have an increase on average, before or after litigation. Meanwhile, Minnesota increased by 2.53 instances each year before litigation, and .93 instances each year after litigation. The final model accounted for 70% of the variance in the rate of people receiving mental health services in the community, indicating its explanatory power is quite high.

Overall, the growth trend was less than would be expected if all deinstitutionalized people were adequately receiving services in the community as numbers were lowered in the state psychiatric hospital. These findings are especially remarkable in light of other research which has shown a general increase of people seeking mental health services across all walks of life during the observed years (Mackenzie, Erickson, Deane, & Wright, 2014). Most of those individuals are receiving mental health treatment from their primary care providers in the form of psychopharmaceuticals (Mackenzie et al., 2014), and thereby, would not be seeking services from the state mental health agency. However, even ripples of that trend do not seem to be showing in this analysis.

Perhaps most significant is that no *Olmstead* response type, regardless of overall growth over time, showed an increase, significant or otherwise, after litigation. This again confounds the express expectation of the courts that after litigation, formerly hospitalized people will be absorbed into community services. While people in the

general community may be accessing services through private practitioners, people with SMI are more likely to have insurance through Medicare or Medicaid and subsequently, receive services through state mental health agencies (McAlpine & Mechanic, 2000). This finding raises significant questions about how people, especially people with SMI, are accessing services in the community.

Hypothesis 4 - Hypothesis 4 examined changes in ten variables related to access to mental health and supportive services (e.g., supported employment, etc.) in the community, such as suicide rates in the general population and employment rates among SMHA consumers. The original hypothesis was that *Olmstead* response types that focused only on deinstitutionalization, like the Third Circuit, or substantially limiting consumer choice and agency, like the DOJ model would be associated with more negative, collateral outcomes, such as an increase in suicide rates and lower employment rates. The hypothesis had mixed support.

Model 4Ai. Model 4Ai examined changes in the percentage of people receiving disability benefits. When examining all states on average from 2001 to 2015, there was a small but significant increase of .13% every year. In 2015, the average across states indicated that 6.32% of the general population received disability benefits. The analysis did not reveal any significantly different growth rates over all observed years, but Ninth Circuit states did have significantly lower percentages of people receiving disability benefits in 2015. Both the Third Circuit and the DOJ states had rates in 2015 that approached being significantly higher than the averages of the other states.

Once the model was broken into pre- and post-litigation sections, overall, there was a small increase of .15% every year that slowed to .10% after litigation, an almost significant change. The Ninth Circuit states had a significant, immediate decrease in the growth rate of the percentage of people receiving disability benefits the year after litigation, and the DOJ had the opposite effect. However, when modeled together, the DOJ's increase became insignificant, indicating that the Ninth Circuit had the stronger effect. While considering these trends, it is important to note that three states - Florida, Maryland (Ninth), and Pennsylvania (Third) - all had litigation in 2001, so they have only one data point in the pre-litigation phase of this data analysis. The final model accounted for 98% of the variance in the rate of people receiving disability benefits, indicating the model explains almost all of the variance in disability benefit rates.

These findings indicate there may be a connection between *Olmstead* response type and disability benefit rates. The Ninth Circuit approach was characterized by personalized assessments for services needed in the community and funding for community services, so it is possible that with this approach, as people are being transferred into the community, they are having more success in employment, and are subsequently less reliant on benefits. Additionally, just as disability benefits are available to all people with disabilities, whether physical or mental, *Olmstead* response types affect all people with disabilities, not only people with SMI. The association between the Ninth Circuit and lower disability benefits rate may be driven by people with physical disabilities, people with mental health related disabilities, or both.

Model 4Aii. Model 4Aii examined changes in the rate of people filing for disability benefits. Looking at trends from 2001 to 2015, there was a significant increase each year of .015 for an average filing rate in 2015 of 1.3. When examined in pre- and post-litigation periods, the filing rate increased by .028 units each year prior to litigation, but then significantly slowed after litigation to average annual increase of .014.

While *Olmstead* response types did not show significant differences when examining all years combined, the Third Circuit did show a significantly different trend after litigation. Specifically, on average, all other states had a jump down - a decrease in the filing rate beyond what would be expected given the general trend of change over time. In the year immediately following litigation, the other states on average had a decrease of .089; however, the Third Circuit actually had a jump up, by .236. While considering these trends, it is important to note that three states - Florida, Maryland (Ninth), and Pennsylvania (Third) - all had litigation in 2001, so they have only one data point in the pre-litigation phase of this data analysis. The final model accounted for 42% of the variance in the rate of people filing for disability benefits indicating its explanatory power is very good, although additional significant predictors would be useful.

These findings further support a potential connection between *Olmstead* response type and disability benefit rates. The Third Circuit's *Olmstead* response type was characterized by an emphasis on discharging people from the hospital, without additional requirements. If people are discharged but unable to connect to services in the community to support employment, an increase in applications for disability benefits could be a natural consequence.

Model 4Aiii. Model 4Aiii examined changes in the rate at which applications for disability benefits were approved. When examining all states on average from 2001 to 2015, there was overall trend of declining approval rates for applications. Specifically, each year the approval rate dropped by .82%, on average. By 2015, the average approval rate was 30.84%.

Upon closer examination, this trend varied between pre- and post-litigation periods. Prior to litigation, states were decreasing their approval rates by 1.03% each year, on average, while after litigation, states on average were diminishing their approval rates by .61% each year – a significant shift. Looking both at all observed years and at the pre- and post-litigation model, no *Olmstead* response types showed significant differences in the rate of disability benefits application approvals. Again, it is important to note that three states - Florida, Maryland (Ninth), and Pennsylvania (Third) - all had litigation in 2001, so they have only one data point in the pre-litigation phase of this data analysis. The final model accounted for 83% of the variance in disability approval rates, indicating the explanatory value of the model is remarkable.

Considering all three of the models developed for part A of Hypothesis 4 shows an overall trend of disability benefits rates increasing, filing rates increasing, and approval rates decreasing. All three rates slowed after litigation, which is somewhat counterintuitive. If many people are being integrated into the community from the state psychiatric hospital, it would make sense for some of them to be ready for employment while others may find necessary support in disability benefits, at least for some time after discharge. Also, it should be noted that several other major economic shifts happened during the observed time period, not the least of which was the Great Recession in 2008.

However, while specific economic events such as that may be a confound for an individual state, it should not be a confound for the overall model as states had rolling litigation dates from 2001 to 2013.

Model 4B. Model 4B examined changes in the annual suicide rate in the general population. When examining all states on average from 1999 to 2016, there was an overall trend of gradual growth. Specifically, each year brought an average increase of .19 in the suicide rate, with the rate in 2016 being 13.65. Upon closer examination, this trend varied between pre- and post-litigation periods, and Florida and DOJ states had significant deviations from the average trend as well.

Prior to litigation, each state had an average annual increase of .126, which doubled after litigation, except for Florida. Florida's rate actually slowed, by more than half, after litigation. However, DOJ states also experienced a remarkable jump, above and beyond its annual increase growing faster. The jump up was an increase over ten times that of the average annual increase. The average across states in 2016 was 13.78. The final model accounted for 77% of the variance in the suicide rate, indicating its explanatory power is quite high.

Upon examination of individual states' rates of growth (see Figure 11), it is clear there is one state that seems to be driving the DOJ increases – New Hampshire. Without an in-depth policy review of all major shifts in the New Hampshire policies or economic outcomes around the exponential growth of the suicide rate, it may be difficult to understand the factors that contributed to this change. However, one fact that was different for New Hampshire, as compared to other DOJ states, is obvious upon review of

Table 2 (p. 68). Among the DOJ states, New Hampshire has the least development required for crisis services, with only a handful of crisis apartments and a mobile unit required – no centers and no hotline. Additionally, no required community education for police, correctional settings, or other community services on the available crisis response. It is possible that a lack of crisis services in New Hampshire contributed to the dramatic increase in suicide rates in that state in the last few years. As *Olmstead* litigation primarily involves finding ways to shift people into the community, it is crucial to understand how different approaches may provide differing levels of support to people once they are in the community, and how this may impact their ability to cope and adjust to the new challenges they face.

Model 4C. Model 4C was intended to examine changes in the readmission rate to any psychiatric hospital within thirty days of discharge from the state psychiatric hospital. As noted in the methods and results section, 50% of the data necessary to test this model was unavailable. While many dependent variables chosen for this dissertation had missing data, this was the only variable with so much missing data that a model could not be estimated. Missing data is addressed by Hypothesis 5.

Model 4D. Model 4D examined changes in the employment rate among SMHA consumers. When examining all states from 2007 to 2017, there was overall trend of growth, such that on average, each state had an annual increase of .3% for a 2017 average of about 20%. However, upon closer examination, this rate of growth seemed to be driven primarily by Minnesota's growing employment numbers. When Minnesota's

effect was parsed out, other states on average showed no growth, while Minnesota's employment rate was quickly increasing. The DOJ was also significantly different, but in the opposite direction; non-DOJ states (including Minnesota) showed slow but steady growth, while DOJ states were actually slowly declining.

Once the observed years were split into pre- and post-litigation periods, Minnesota and DOJ states were again significantly deviating from the average trend as well. In both cases, other states were showing a significant annual decrease prior to litigation, which switched to an annual increase after litigation, but the change was not significant. For all states, there was an immediate jump up in the employment rate, more than would be expected based on the average annual increase. For Minnesota, this jump was even higher than for other states. In the DOJ states however, the jump was less; this difference was significant when modeled on its own, but not significant in the model with Minnesota, indicating that the effect from Minnesota was stronger. While considering these trends, it is important to note that five states - Florida, Maryland (Ninth), California (Ninth), Washington (Ninth), and Pennsylvania (Third) - all had litigation before 2007, so they have only post-litigation in these analyses. However, Florida, the Ninth Circuit, and the Third Circuit did not have any significant deviations from the post-litigation trends. The final model accounted for 46% of the variance in the employment rate, indicating its explanatory power is very good.

The employment rate results are interesting for several reasons. First, the DOJ settlement agreements always included ACT teams (which include supported employment specialists) and quite often also included requirements to develop general supported employment services for hundreds, if not thousands, of consumers. The lack

of significant increases in employment rates among SMHA consumers raises concerns about how consumers are being served by supported employment services. Additionally, with only Minnesota showing marked increases, these findings support viewing Minnesota's response type to *Olmstead* as an example of how to connect consumers to positive outcomes, including increased employment rates.

Models 4Ei-4Eiii. Model 4Ei examined changes in the spending patterns of states on their judicial system. When examining all states on average from 1996-2015, for every dollar increase in the total state budget, judicial budget per capita spending increased 1.6 cents. After controlling for the total state budget, the judicial budget actually decreased each year by a little over a dollar. When the observed years were divided into pre- and post-litigation periods, the judicial budget prior to litigation changed as would be expected given the overall state budget, but after litigation, it slowed significantly, and was losing almost two dollars every year. None of these results varied significantly as a result of *Olmstead* response type. The final model accounted for 93% of the variance in judicial spending, indicating that explanatory power of the model is remarkable.

Model 4Eii examined changes in the spending patterns of states on law enforcement. When examining all states on average from 1996-2015, for every dollar increase in the total state budget, law enforcement budget per capita spending increased 2 cents. After controlling for the total state budget, the law enforcement budget was still rapidly increasing each year by almost four dollars. When the observed years were divided into pre- and post-litigation periods, there was not a significant difference; police

budgets were outpacing the total state budget before litigation and they continued to do so after. None of these results varied significantly as a result of *Olmstead* response type. The final model accounted for 97% of the variance in law enforcement spending, indicating that explanatory power of the model is remarkable.

Model 4Eiii examined changes in the spending patterns of states on their correctional system. When examining all states on average from 1996-2015, for every dollar increase in the total state budget, correctional budget per capita spending increased 3.4 cents. After controlling for the total state budget, correctional spending was actually decreasing each year by a little over four dollars. When the observed years were divided into pre- and post-litigation periods, the correctional budget prior to litigation changed as would be expected given the overall state budget, but after litigation, it slowed significantly, and was losing over four dollars every year, very similar to judicial system spending trends. Correctional spending did show significant variation by *Olmstead* response type; the Ninth Circuit states saw a drastic bump in spending immediately after litigation while the Pennsylvania slowed its correctional spending after *Olmstead* litigation significantly less than other states on average did. The final model accounted for 90% of the variance in correctional spending, indicating that explanatory power of the model is remarkable.

Overall, all three models explained 90-97% of the variance in their per capita spending rates. Most of that explained variance was accounted for after the total state budget was included in the model. Judicial spending and correctional spending were less than would be expected, given the growth of the total state budget, but only after

litigation. Police spending, however, consistently outpaced the general state budget, both before and after litigation.

Model 4F. Model 4F examined changes in the incarceration rates of states. When examining all states on average from 1996 to 2016, there was no consistent change over time. The average incarceration rate in 2016 was 4.06. The Ninth Circuit states were decreasing their incarceration rate over all observed years, while the other states on average showed no change. This finding is particularly remarkable in light of the fact that the Ninth Circuit states had such a dramatic bump in correctional spending immediately after litigation. Ninth Circuit states had litigation in 2001 and 2005 – both years in the first half of the observed period. It is possible that the increase in spending was for programming that helped reduce future recidivism.

The lack of growth over all observed years reveal significant shifts when parsed into pre- and post-litigation periods. On average, all states were increasing their incarceration rate prior to litigation by .05 instances per year, and then significantly slowed after litigation by .06 instances per year. Both Florida and Pennsylvania approached being significantly different from the post-litigation trend by increasing their instances of incarceration each year by .06 instances. Florida's results should most likely be ignored, in light of the caveat from data collection that administrators modified the data collection method during the post-litigation period, which resulted in a significant jump upwards not otherwise accounted for by the linear slope. The final model accounted for 65% of the total Level 1 variance, indicating that this model's explanatory power is quite high.

These findings are significant because after deinstitutionalization, a major concern was *transinstitutionalization,* including shifting people from the state psychiatric hospital into the state correctional systems. A major hypothesis of this dissertation was that approaches to *Olmstead* that mimicked deinstitutionalization without reflection, like the Third Circuit, could leave open the door for states to repeat the same mistakes deinstitutionalization made sixty years ago. While this correlational data is insufficient to draw any firm conclusions, the associations between the response type and incarceration rate open the possibility that those relationships have been created.

Hypothesis 5. Hypothesis 5 examined differences in reporting practices by states. The original hypothesis was that many states would fail to collect data on outcomes other than the institutionalized population in their state, especially if that is the primary outcome required by their circuit court or noted in their *Olmstead* plan. This hypothesis was partially supported. While the utilization rate of the state psychiatric hospital was actually one of the more poorly reported dependent variables, missing a little over 10% of its data across states, Minnesota, the *Olmstead* response type with the most required development and outcomes, had the best tracking rate for a diverse range of dependent variables. The Ninth Circuit was next in reporting performance, beating out the Third Circuit and Florida, which did not require the state to show improvement on any markers other than the state psychiatric hospital census.

Legal Analysis of Each *Olmstead* Response Type

Olmstead v. L.C. has been referred to as the *Brown v. Board of Education* (1954) for people with disabilities (e.g., Cerreto, 2001). *Olmstead* focused on issues of segregation and took aim at the stereotypes of incompetence that so often keep people with disabilities from experiencing more complete integration into the community. The decision was a watershed moment for disability rights that avoided destroying the protections that the ADA had so carefully crafted – specifically, the recognition of unjustified segregation as discrimination.

The opinion was thoughtfully tailored to acknowledge the heterogeneous clinical needs of individuals with SMI. Justice Ginsburg explicitly recognized a place in the treatment continuum for inpatient care, even long-term inpatient care. Each argument in the opinion contributed to an overarching theme – while unjustified segregation was discrimination, the segregation was only unjustified when both the patient and the treatment team agreed there was no reason for the segregation to continue. If the only reason for the segregation was the state's incompetence in developing quality inpatient care, efficient transition programs, and adept community treatment options, that was institutionalized discrimination.

However, for all its directness in defining discrimination in this context, the *Olmstead* opinion is simultaneously vague, in the way that Supreme Court opinions typically are. The bulk of the confusion seems to cluster around the affirmative defense the Court described at the end of its opinion, almost as an afterthought. Under this defense, even though the state is violating the ADA, it could survive a lawsuit on the grounds that not discriminating in the litigated circumstances would fundamentally alter the state's administration of its programs and cause discrimination against others, by

forcing the state to deliver benefits in an uneven manner. Justice Ginsburg gave two examples of an attempt at this defense: one that would work, and one that would not. The example given as inadequate was simply the state contending that finances did not allow for the plaintiffs' needs to be met. Alternatively, a state showing a plan to move people into the community as quickly as possible, with a reasonably paced waiting list, could provide protection against an *Olmstead* claim.

Florida

Florida's lawsuit in 2001 provided one of the only examples of a state not being found in violation of the ADA. The court held that Florida's initiation of discharge planning upon admission and quick placements after a determination of readiness for discharge did not violate the ADA. This finding seems consistent with the *Olmstead* holding; if people are being prepared for discharge upon admission and quickly placed when appropriate, there is no unjustified segregation. The most remarkable outcome associated with Florida was that while suicide rates were increasing among all the other states, Florida's rate decreased after litigation in 2001. Florida was the only *Olmstead* response type to show this outcome.

Meanwhile, the Third Circuit, the Ninth Circuit, the DOJ states, and Minnesota all took different approaches to defining the affirmative defense left open by the Court. Minnesota and the DOJ states, as settlement agreements rather than court opinions, are far more detailed in their requirements than the Ninth or Third Circuit.

Third Circuit

The Third Circuit decided its approach only two years after the original *Olmstead* decision, in 2001. The first district court decision was a remarkably toothless application of *Olmstead.* All of the parties and even the court agreed there was discrimination via unjustified segregation under the ADA and the Rehabilitation Act – approximately one hundred people were being unnecessarily institutionalized against their wishes at any given moment during the litigated time period. However, the court accepted the defendants' averment that the hospital did the best it could with the resources it had, despite the lack of any formal procedures even closely approximating the example plan given in the plurality opinion of the *Olmstead* court. There is no standard for development of even a few community placements at a time or requirement for more formal discharge-ready lists to monitor more uniformly the amount of time people wait for community placements. Under this analytic framework, it is difficult to imagine any improvement to the NSH discharge process that would *not* be considered a fundamental alteration of services.

While the Third Circuit's final holding was an improvement over this early attempt, and even included a passionate discourse on the rights of people with SMI, it still had several fatal flaws. First, the court had a shift in language from its analysis to its conclusory holding that was subtle but eviscerated this crucial decision's potency. In its critique of DPW's plan, the court refers to "eligible patients" waiting for discharge. The facts of the case indicate that, at any given time, approximately one-third of the 300 to 400[16] class members (non-forensic patients at NSH) were considered clinically

[16] The class had grown to 410 individuals by the second district court decision. *Frederick L. v. Dept. of Public Welfare,* 2004b, p. 3.

appropriate for discharge by their treatment teams and preferred to live in the community; essentially, they are members of the group the *Olmstead* opinion explicitly considered to have a valid claim of discrimination via unjustified segregation (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 598).

However, the Third Circuit ultimately required of DPW that it provide specific dates for discharge of an approximate number of patients, in the context of continuing its overall trend of deinstitutionalization since the 1950s, and after criticizing the state's goal of closing *up to* 250 hospital beds annually as being too vague. In the middle of its opinion, the Third Circuit switched from "eligible patients" to all hospital residents. If the Third Circuit requires Pennsylvania to close a certain number of hospital beds each year, eventually, there will be no place for people with SMI to receive long-term inpatient services. This would directly violate the insistence of both Justice Ginsburg that the ADA does not require States to close all institutions and "plac[e] patients in need of close care at risk," (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 604) as well as Justice Kennedy that "it would be a tragic event, then, were the… ADA to be interpreted so that States had some incentive, for fear of litigation, to drive those in need of medical care and treatment out of appropriate care and into settings with too little assistance and supervision" (*Olmstead v. L.C. ex rel. Zimring,* 1999, p. 610). The Third Circuit would have been better advised to select more narrowly tailored brightline, measurable markers.

Another major flaw was the court's reasoning when it came to judicial review of the state budget. Separation of powers is a fundamental component of our government; managing the state budget has historically been allocated to the executive and legislative branch. However, the Third Circuit court seemed to imagine that placing any

requirements on how the state complied with the ADA would require a line by line review and approval of the state budget, which was not an argument even entertained by any court in any other case. If a court were to issue an opinion with a new state budget and dictate that the legislature should accept it, in the name of interpreting and applying the ADA, that would certainly violate the separation of powers. Conversely, if the court were to allow the state to defend against allegations of discrimination, in any form, by merely averring it has money problems, then the court is no longer serving its role as interpreter and enforcer of statutory and constitutional rights. It would be ridiculous for a state to successfully defend itself against alleged Equal Protection clause violations, such as the racial discrimination banned by *Brown v. Board of Education* (1954), by simply saying the court did not have the authority to tell the state how to allocate its public-school budget.

A related logical flaw in the Third Circuit's final opinion was its myopic focus on the state psychiatric hospital census. Without requirements to develop alternative treatment delivery systems in the community, the court leaves vulnerable those who are discharged. Arguably, the court is trying to instigate the state psychiatric hospitals to discharge more people than ever before, and yet it fails to require the state to develop the community options to support such an influx. In *Olmstead*, the state hospital had tried to discharge one of the plaintiffs to a homeless shelter, which the Court found reprehensible, yet the application of *Olmstead* by the Third Circuit fails to consider how to prevent an outcome such as this. As predicted, the Third Circuit (and everywhere but Minnesota) failed to show that the numbers being treated in the community increased after litigation.

When considering the policy outcomes of the Third Circuit analyzed by this dissertation, several interesting trends surfaced. First, despite the Third Circuit's emphasis on lowering the state psychiatric hospital census, it did not have a significantly faster rate of deinstitutionalization. The Third Circuit relied heavily upon the reasoning that brightline markers would force the state to quickly and efficiently discharge people from the state hospital, but they did so with no more success than other states on average.

The Third Circuit did have a few collateral effects that should also be noted. On none of the collateral outcomes did the Third Circuit fair significantly better than the other states. Instead, the Third Circuit experienced a significant immediate increase in the filing rate for disability benefits immediately after litigation, higher incarceration rates in the years following litigation, and it decreased its spending on corrections less than other states in the years following litigation.

Overall, the Third Circuit show a number of logical, legal, and policy flaws in its application of *Olmstead*. The Third Circuit did not display a significantly faster rate of deinstitutionalization – it's one requirement. It failed to apply the spirit of *Olmstead* with fidelity, as shown by its lack of appreciation for the role of long-term inpatient services in the continuum of care for people with SMI as well as its undue hesitation to hold a state accountable for discrimination, even if it costs the state money. The Third Circuit also ended up with a number of problematic collateral effects, including incarceration rates and spending, as well as disability applications.

Ninth Circuit

Like the Third Circuit, the Ninth Circuit emphasized a lowered state psychiatric hospital census but did not require specific numbers by a specific date. The Ninth Circuit did, however, go beyond the Third Circuit by requiring that states also show funding for community services, while lowering the state psychiatric hospital census. Interestingly, the Ninth Circuit showed the opposite pattern of results from the Third Circuit – a drop in disability benefit recipients the year after litigation and an overarching decrease in the incarceration rate both before and after litigation. The Ninth Circuit did have a significant, immediate bump in correctional spending after litigation, but not a sustained change over time.

The Ninth Circuit's approach cured many of the issues in the Third Circuit's approach, including having more comprehensive requirements and not balking at requiring funding shifts. However, the Ninth Circuit did perpetuate the emphasis on uncapped deinstitutionalization. In the cases arising from Washington and California, the court lauded the trend of deinstitutionalization while failing to consider where a reasonable end might lie.

For the purposes of this dissertation, Maryland was included in the Ninth Circuit *Olmstead* response type because while it was clearly not geographically in the Ninth Circuit, the ideology represented by its district court decision closely matched the rhetoric and reasoning of the Ninth Circuit appellate court. Maryland flirted with a more nuanced view of how to lower hospitalization rates while appreciating the role of inpatient services, but ultimately fumbled the execution.

Specifically, Maryland introduced the idea of a cap on deinstitutionalization for the purpose of preserving high-intensity services for those who need them, either acutely

or chronically (*Williams v. Wasserman,* 2001). This approach more comprehensively acknowledged the dynamic and complex nature of providing services to people with developmental and psychiatric disabilities. However, while the Maryland District Court acknowledged the need for some hospital beds to remain available permanently, it nonsensically undercut its own valuation of inpatient services by applauding the state for prioritizing community programs over "institutional" programs. If the state acknowledges the need for programs with high-intensity services, those programs should logically be equally valued and (financially) supported as part of a comprehensive treatment continuum. Overall, the Ninth Circuit got closer, but still failed to accurately respect the subtlety of valuing inpatient services while still fighting to end discrimination via unjustifiable segregation.

Department of Justice

The Department of Justice (DOJ) has litigated many cases related to *Olmstead* but the cases most applicable to the issues addressed by this dissertation took place in 2010-2013 in Delaware, Georgia, New Hampshire, and North Carolina. Those settlement agreements were chosen because they impacted people with mental illness on a statewide level. They consistently required substantial infrastructure development for community mental health services, such as ACT teams, scattered-site supported housing, supported employment, and peer services, along with crisis services, short-term residential, and inpatient services for psychiatric stabilization in the community.

Notably, the DOJ also had settlement agreements with nursing homes that served primarily adults with SMI, including in New York and Missouri (*U.S. v. Marion County*

Nursing Home District, 2013; *U.S. v. State of New York*, 2013). Similar to the other cases noted, the DOJ required substantial development of scattered-site housing. Unlike the other cases noted, housing seems to be the only required change. One theme that seems to be consistent across all of these settlement agreements is a one-size-fits-all model for community integration. According to the DOJ, to best integrate into the community from a hospital or nursing home, one should preferably live alone in an apartment in a building with fewer than 10% of the units occupied by someone with a disability known to the state, work in supported employment, and receive mental health services through an ACT team. Additionally, should one decline to move into such a setting and voice a preference for staying in an assisted living facility, even after being informed of the opportunity to engage in such services, community service providers are required to regularly check in and devise strategies to overcome one's objections to community integration. Integrate, the way they say, or be pursued until you do.

It would be difficult to convincingly argue that the DOJ model does not limit choice; typically, only one style of housing is acceptable, along with set routes for community treatment and supportive services. While consumers are ostensibly put at the center of planning for community integration, the DOJ has clearly defined what is appropriate and acceptable for them to choose, making their "person-centered planning" seem superficial. This approach to community integration, while it wraps itself in evidence-based services that have been championed by the recovery movement (e.g., Becker, Drake, & Naughton, 2005), seems incongruent with the recovery principles of self-determination and empowerment due to its lack of choice (e.g., Rappaport, 1987).

Beyond these ideological concerns, DOJ states have shown an association with some problematic collateral outcomes. While DOJ states did not slow on deinstitutionalization rates after *Olmstead* litigation as most states did, and DOJ states did increase spending on community mental health services more than other states post-litigation, there were some concerning associations with suicide rates and employment rates. While most states were decreasing their employment rates each year, there was also a significant immediate increase after litigation which DOJ states experienced only to a muted degree. Additionally, while suicide rates on average among the ten states were increasing prior to litigation (.12 instances increase per year), and then doubled after litigation (.25 instances increase per year), DOJ states also had a significant immediate jump up the year after litigation that was over ten times the average annual increase prior to litigation (1.64 instances). As noted in the discussion earlier, this sharp increase seemed to be driven primarily by New Hampshire, which did have fewer crisis services developed as a result of the DOJ settlement than many other DOJ states.

Minnesota

Finally, Minnesota's litigation began in 2011 but its settlement agreement was not accepted by the court until 2015. Of all the *Olmstead* response types, Minnesota's approach seems to be the most comprehensive. It involved all the development of a DOJ settlement with none of the choice restriction, as well as the community treatment alternatives funding championed by the Ninth Circuit without an unwarranted emphasis on lowering the state psychiatric hospital numbers without a cap.

Minnesota was the only *Olmstead* approach style to actually show an increase in the rate of people receiving mental health services in the community, although this trend was present prior to their litigation date. Additionally, while Minnesota's state psychiatric hospital had an immediate decrease in funding after litigation, it had its funding increased more than the other states each year, potentially signaling support for the state psychiatric hospitals as part of the treatment continuum. Finally, Minnesota had a jump up in employment rates immediately after litigation that was significant when compared to the other states, and particularly noticeably in comparison to DOJ states.

Ultimately, the legacy of *Olmstead* is only as valuable as the enforcement of its integration mandate. As the courthouse is proving the primary battleground for civil rights, including disability rights, how courts interpret and apply *Olmstead* intimately impacts its likelihood of creating the desired change. Consideration of the observed, associated outcomes can only aid courts in their task of applying *Olmstead* to complicated fact patterns.

Limitations

There are many limitations in the results and conclusions of this dissertation, perhaps the most pressing of which is the fact that these analyses are correlational in nature. There exist too many potential confounds in a non-experimentally designed study, such as other state mental health policies, uncontrolled and/or unexpected events, and unknown moderators. On a practical level, however, a truly experimental approach will almost certainly never be feasible on the required scale. The results of the present study reinforced the credibility of the analytical approach applied here; while this

correlational data is insufficient to draw any firm conclusions, the associations between the response type and dependent variables open the possibility that these relationships of interest have been created.

Observed years varied from analysis to analysis depending on availability of data; some states in some analyses only had one year prior to litigation, which is not ideal. Conversely, some states, particularly DOJ states, experienced *Olmstead* litigation quite recently and have not had the chance to show change over many years. Additionally, this dissertation only looked at ten states, which is a fairly limited number of cases. Many sources of data were inconsistent across states or across years, by failing to operationally define data in the same way or failing to collect it consistently. Data collection was so poor in some respects that one model could not be estimated at all given the gross lack of data.

Future Directions

Future research has many directions to go from here, as this area of research is relatively new. First, this line of research could be expanded to include more states. It is likely there are more states that have developed *Olmstead* plans that would fit into one of these categories (or create their own) but did so outside of litigation and subsequently were not part of this review. DOJ has intervened in multiple other state mental health systems and psychiatric hospitals, but not technically on *Olmstead* grounds (e.g., Civil Rights for Institutionalized Persons Act [CRIPA]); therefore, there may be states with essentially DOJ-*Olmstead* policies that were not included in this review. Similarly, it is likely there are more relevant outcomes that could be addressed for each state.

While future directions in this line of research could benefit by zooming out, as in collecting data on additional states and additional outcomes, it could also benefit by zooming in, and looking at states individually, on a case level basis, to determine how policies, whether related to *Olmstead* or not, have influenced major outcomes. Eventually, it would be helpful to narrow down overall state approaches to major policy problems and individual active ingredients that could be generalized across multiple settings.

CHAPTER 10: RECOMMENDATIONS

The work of this dissertation has led to a number of recommendations which are based on empirical findings, ideological considerations, and legal analysis.

1) **States should develop a base number of state psychiatric hospital beds, as well as a base number of short-term psychiatric hospital beds, considering population and need, and fund their psychiatric hospitals appropriately given this base number.**

Despite acknowledgements by several courts that even long-term inpatient psychiatric units have a legitimate place in the treatment continuum, state psychiatric hospitals continue to be the pariah of mental health treatment. The Treatment Advocacy Center (2016) notes that compared to other similarly developed countries only New Zealand, Chile, Italy, Turkey, and Mexico provided fewer state psychiatric inpatient beds per capita than the United States. While many researchers identify 40-60 beds per 100,000 members of the general population as a foundational guide (Treatment Advocacy Center, 2016), each state should realistically identify its own need for short- and long-

term hospitalization beds.

2) **States should consistently collect data and provide resources for its analysis to improve services.**

Much of this dissertation's idealized analyses have been limited by the availability of data. Specifically, better counts of mental health service provision, both inpatient and outpatient, should be collected. Inpatient services should have additional information available, such as the type of services provided (e.g., competency restoration versus risk reduction for not guilty by reason of insanity (NGRI), etc.), diagnosis, length of stay by reason committed, and length of wait for community placement after determination of discharge readiness. All data should be made publicly available to encourage transparency and public policy research. When providing data on civil and forensically involved clients, data points should include whether the individual is committed civilly for danger to self, danger to others, or grave disability, and whether the individual is forensically committed for competency evaluation, competency restoration, NGRI risk reduction, or sexually violent risk.

3) **States should ensure that their Olmstead plans preserve choice for consumers.**

Providing consumers with meaningful, informed choice is required to be ideologically consistent with the recovery movement. Choice should be available across services provided in the community - housing, medication management, employment opportunities, psychological services, and case management. This requires a continuum

of services to be offered from which consumers can freely choose, rather than the designation of preferred recovery path to the exclusion of alternatives.

4) **States should ensure that community providers are providing quality services and are sufficiently funded to provide services for those leaving the state psychiatric hospital.**

It is unrealistic and unfair to expect community providers to be able to accommodate an influx of individuals discharged from the state psychiatric hospitals without providing appropriate resources. Furthermore, community providers who care for those discharged from the state psychiatric hospital should be evaluated regularly to ensure quality provision of services. The quality assurance mechanisms in the DOJ settlement agreements provide a helpful starting framework for this type of quality evaluation.

5) **States should provide for coordination of services between the state psychiatric hospital and community providers.**

The empirical results of Hypothesis 3 of this dissertation suggest that individuals being discharged from the state psychiatric hospital are not being absorbed into available community mental health services, outside of possibly Minnesota. Coordination of services between the state psychiatric hospital and community providers can contribute to consumers receiving the services they need in the community. Additionally, lack of coordination between the state psychiatric hospital and community mental health centers is commonly considered a major factor in the trends of transinstitutionalization observed

after deinstitutionalization; providing this coordination now would help states ensure their *Olmstead* plans do not unreflectively repeat the mistakes of deinstitutionalization.

6) **States should develop comprehensive crisis services available in the community.**

New Hampshire's data shows an alarming recent spike in suicide rates across several years. While the present study does not establish a causal link between availability of crisis services in the community and suicide rates, such a relationship is not only possible, but logical. Even in the absence of empirical support, there are ideological and ethical reasons to provide comprehensive crisis services for consumers experiencing psychiatric emergencies.

CONCLUSION

Olmstead was a landmark disability rights case, with nationwide implications. The Court held that if a person who has been institutionalized for developmental, mental, or physical disability wants to move into a less restrictive setting and is found to be appropriate for that level of care by a mental health professional, the state must have reasonable accommodations in place to allow that person to do so. Failure to comply with these standards is a violation of the Americans with Disabilities Act, and not justified solely by a lack of state resources.

Not all circuits interpreted the *Olmstead* case similarly, creating nationally disjointed criteria for a "good" *Olmstead* plan. For some states, the plans or policies put forward in response to *Olmstead* seem to be merely extensions of the

deinstitutionalization policy that gained traction nationally in the 1950s by requiring only long-term hospitalization bed reduction. Other states took a more comprehensive approach, requiring considerable development of community resources.

This dissertation began with legal research, which identified five *Olmstead* response types in the litigation subsequent to the original U.S. Supreme Court decision. These *Olmstead* response types are distinct sets of criteria for how states are to comply with the requirements of *Olmstead*, such as decreasing the state psychiatric hospital census, generally funding community resources, or developing particular types of services in the community. This dissertation investigated the relationship between these *Olmstead* response types and fifteen dependent variables over twenty years, including parts of the state budget, employment rates, suicide rates, pursuit of disability benefits, incarceration rates, mental health treatment rates, and data collection.

All states showed lower state psychiatric hospital census numbers, but only Minnesota showed an increase in community treatment rates. The Ninth Circuit states had lower rates of people on disability benefits, while the Third Circuit had a significant increase in filings for disability benefits immediately after litigation. Suicide rates were much lower in Florida but showed alarming increases in the DOJ state of New Hampshire. Minnesota had greater increases in employment rates after litigation, and all states had slower incarceration rates after litigation. States managed their budgets in different ways after litigation, but the most remarkable finding is that there was not an increase in funding for community mental health treatment after litigation outside of DOJ states. DOJ states, the Third Circuit, and Florida had the highest rates of missing data

across all variables, (8.2-8.6%) while Minnesota had the lowest rate of missing data (5.2%).

Overall, the results of the present study have important implications for how states apply *Olmstead*. These findings can be used to guide policy makers as they attempt to craft mental health policy that honors the spirit of *Olmstead* while creating outcomes that meaningfully contribute to consumers' quality of life. The findings can also be used to apply *Olmstead* in ways that are ideologically consistent with the recovery movement.

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Appendix of Figures and Tables

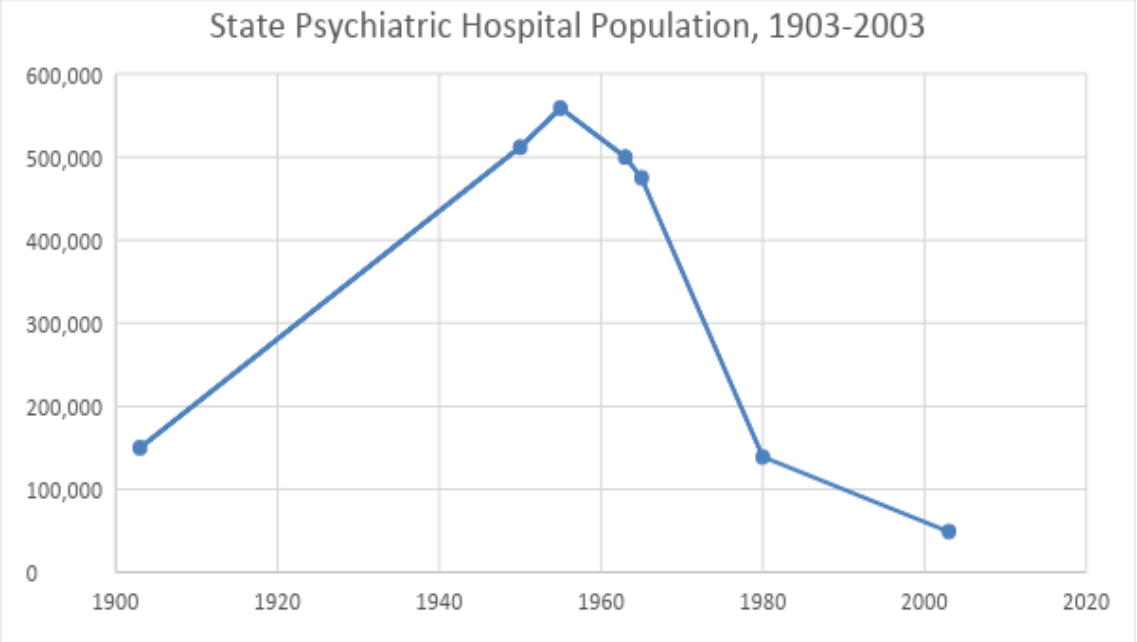

Figure 1. Nationwide average daily census of the state psychiatric hospitals from 1903 to 2003. Citations for the seven anchored points on the chart are provided throughout the text of this section.

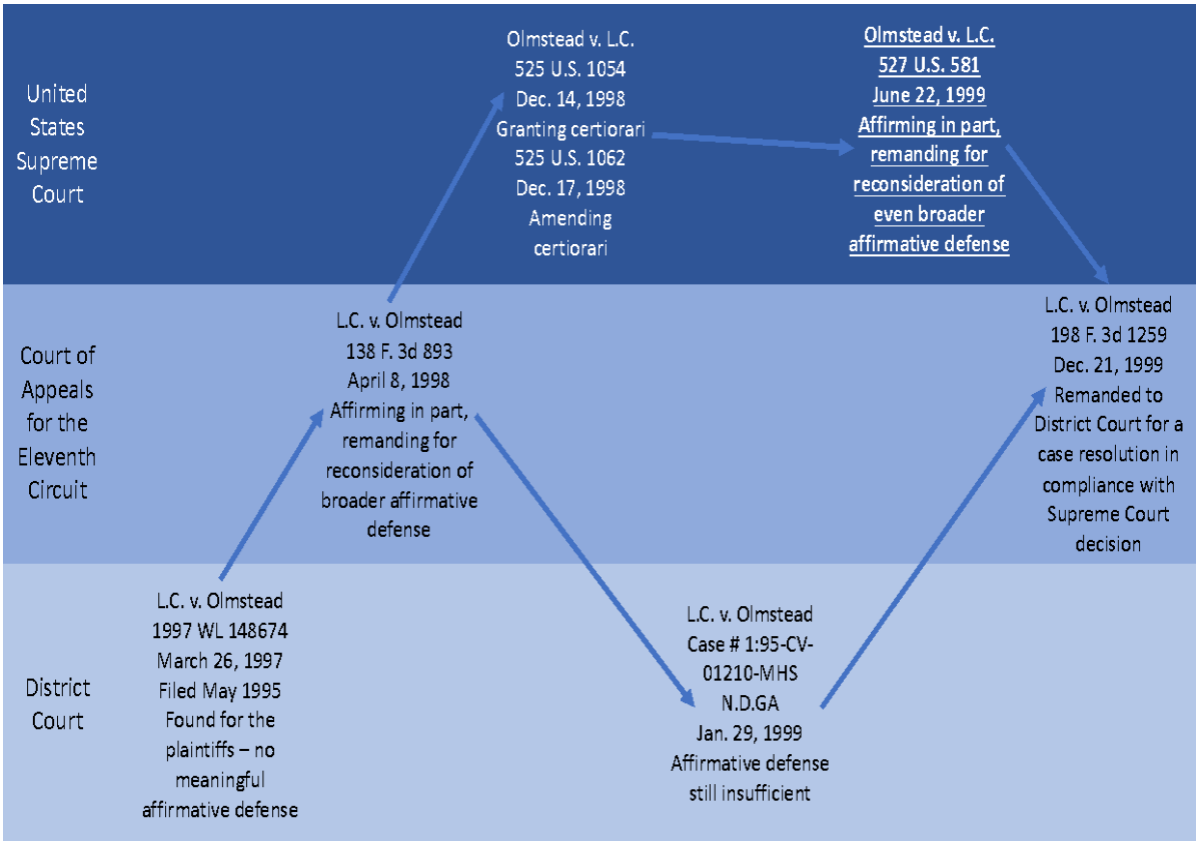

Figure 2. Procedural history of the *Olmstead* case. United States Supreme Court opinion addressed in this section is indicated in the procedural history by being bolded and underlined.

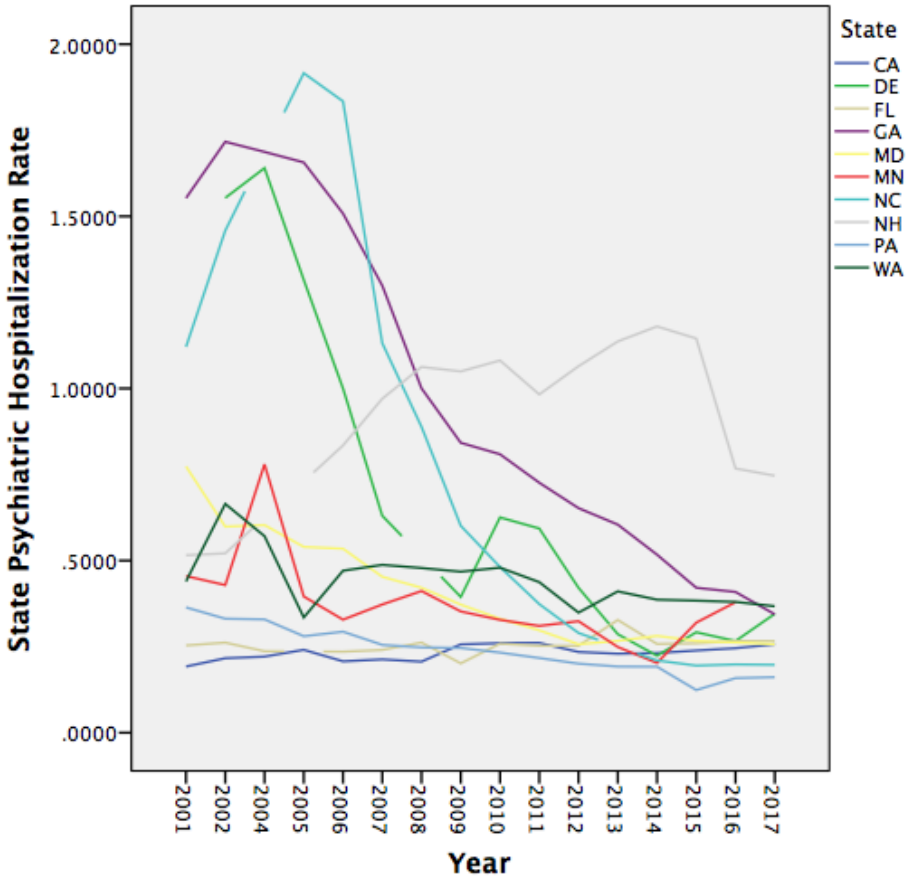

Figure 3. State psychiatric hospitalization rates over time.

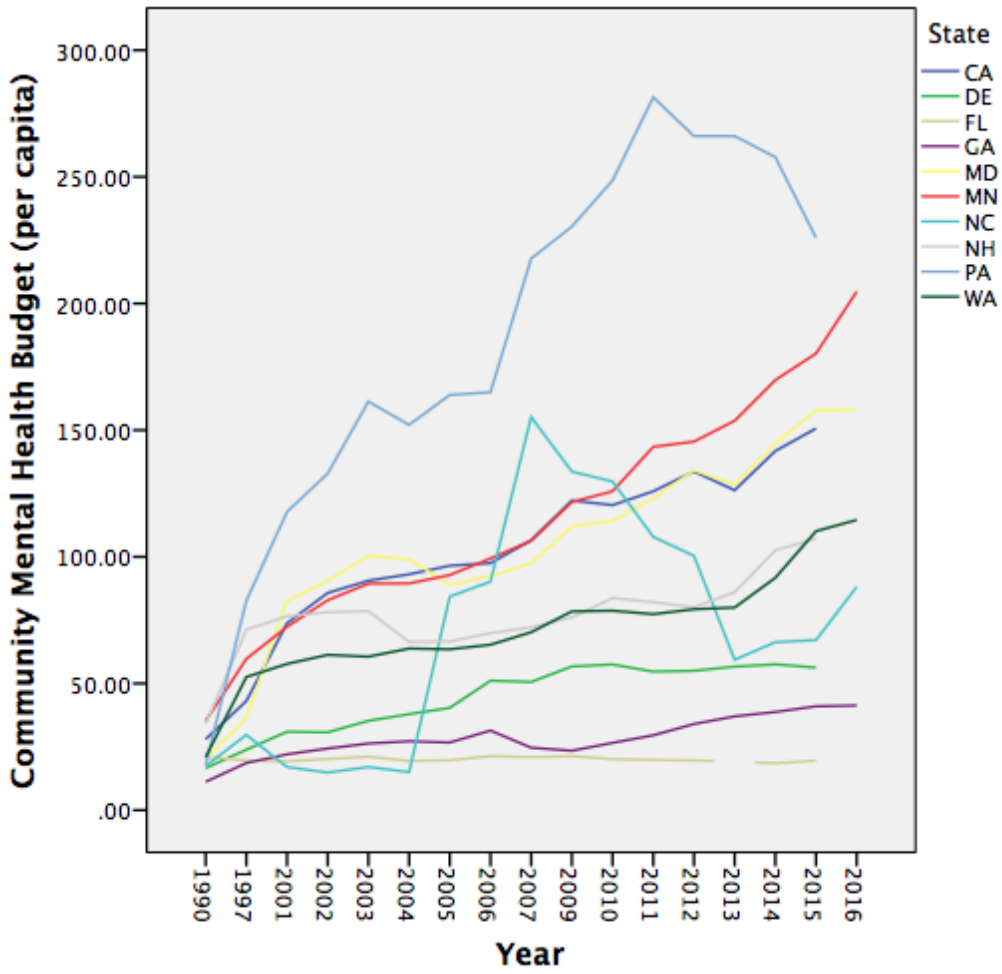

Figure 4. Community Mental Health Treatment Budget per capita rates over time.

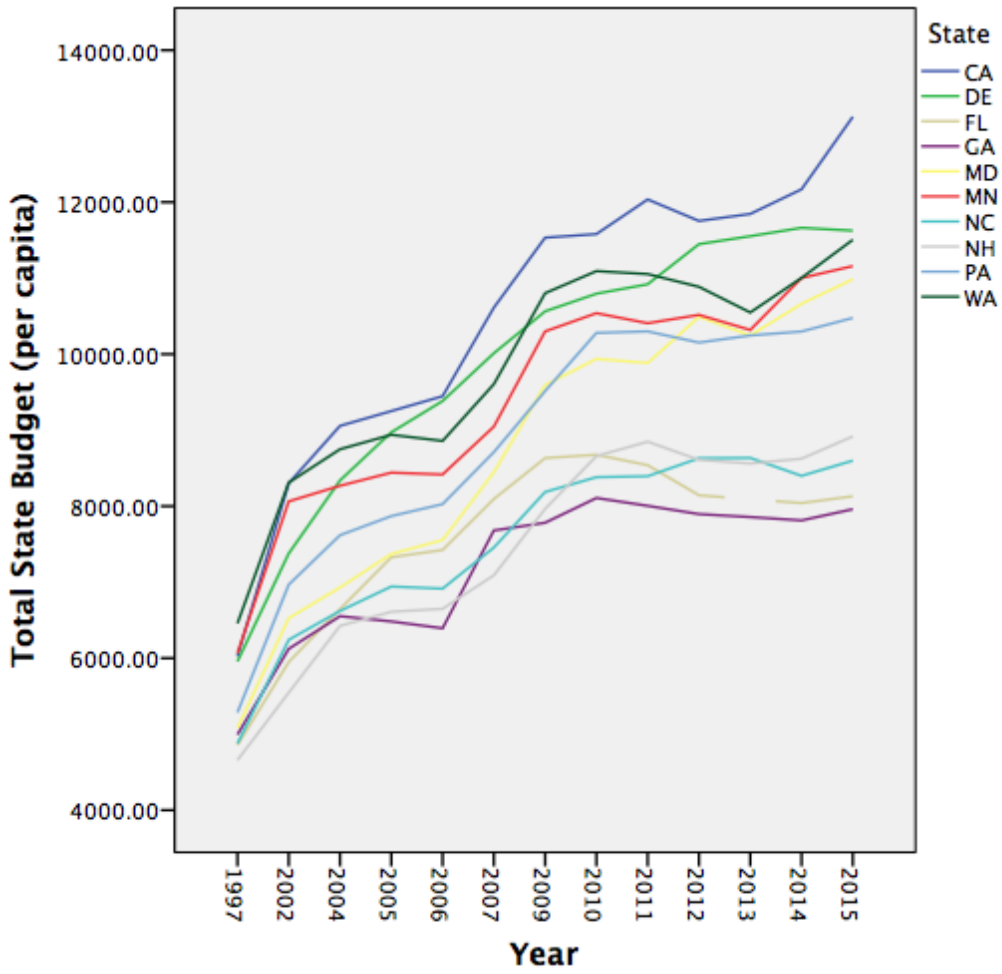

Figure 5. Total state budget per capita rates over time.

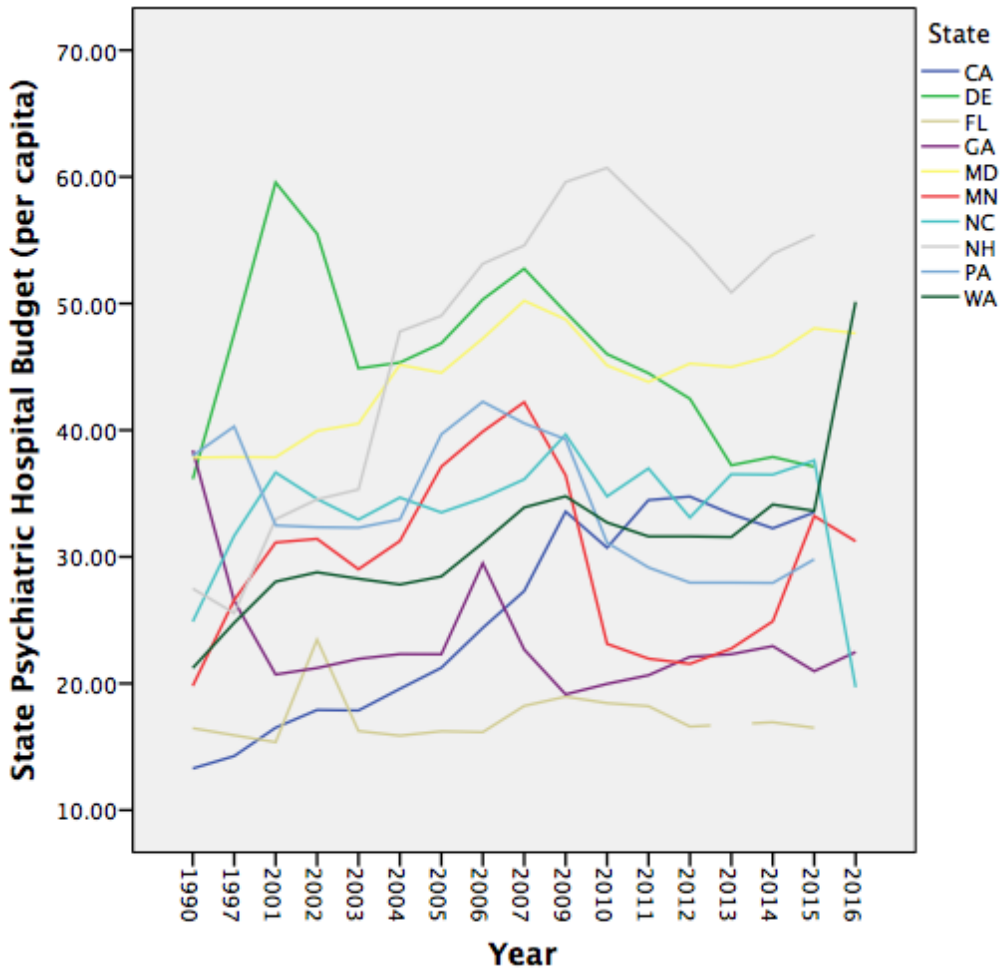

Figure 6. State psychiatric hospital budget per capita rates over time.

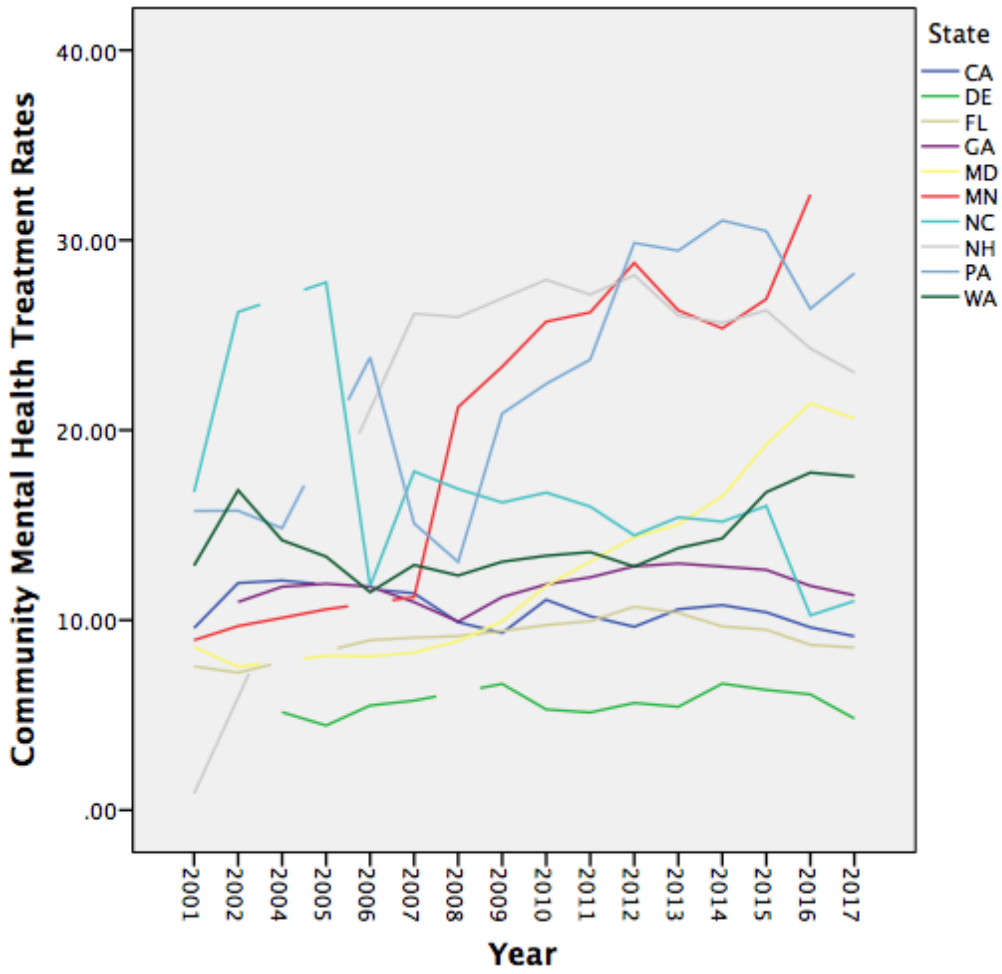

Figure 7. Community Mental Health Treatment rates.

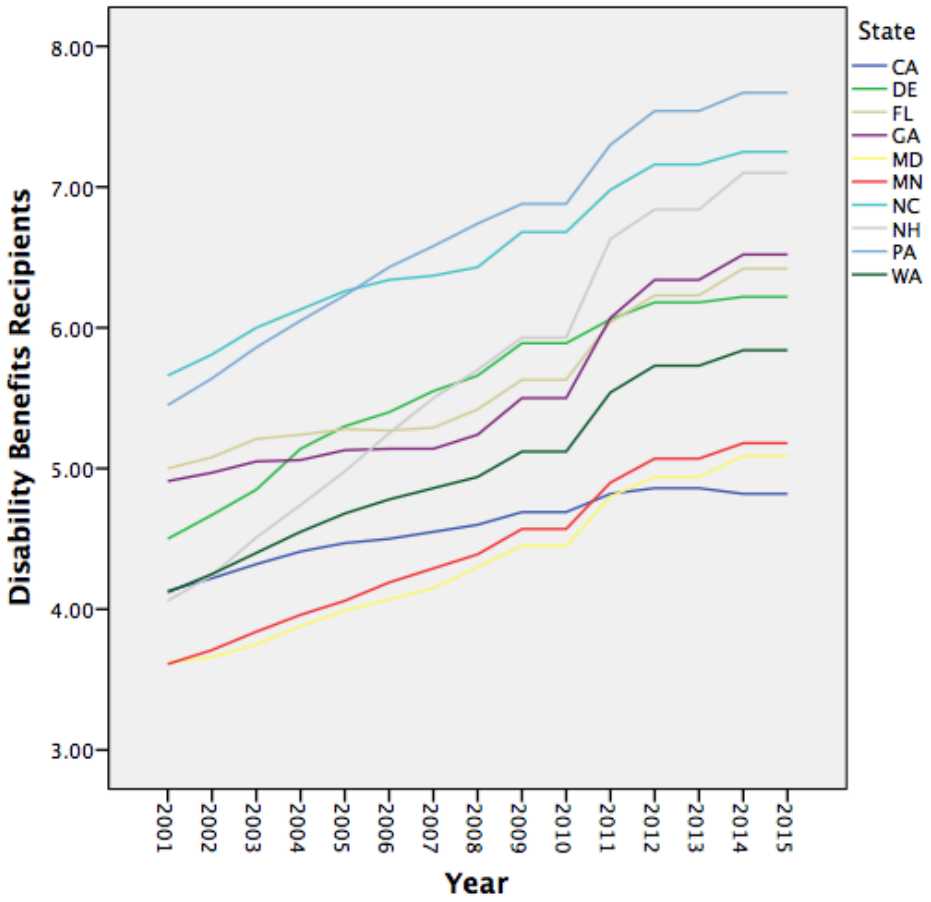

Figure 8. Rates of people receiving disability benefits over time.

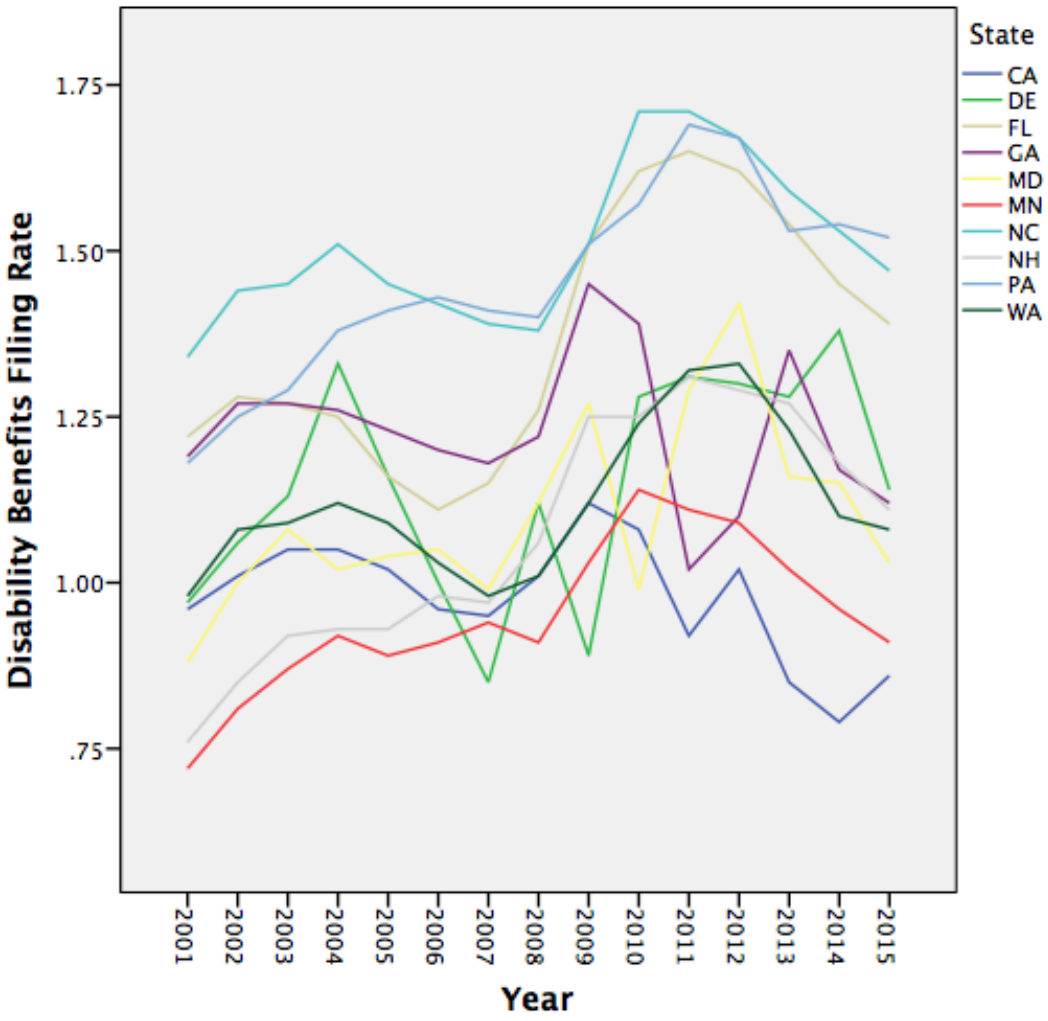

Figure 9. Disability benefits filing rates over time.

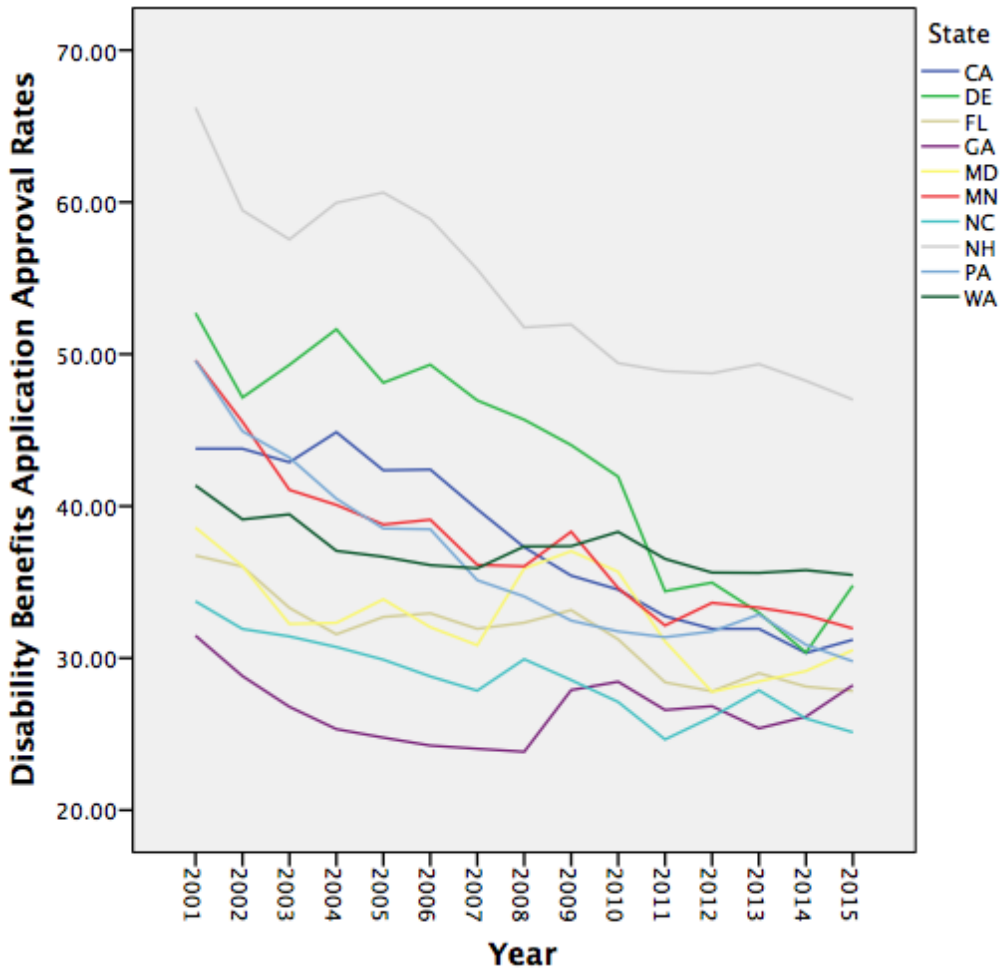

Figure 10. Disability benefits application approval rates over time.

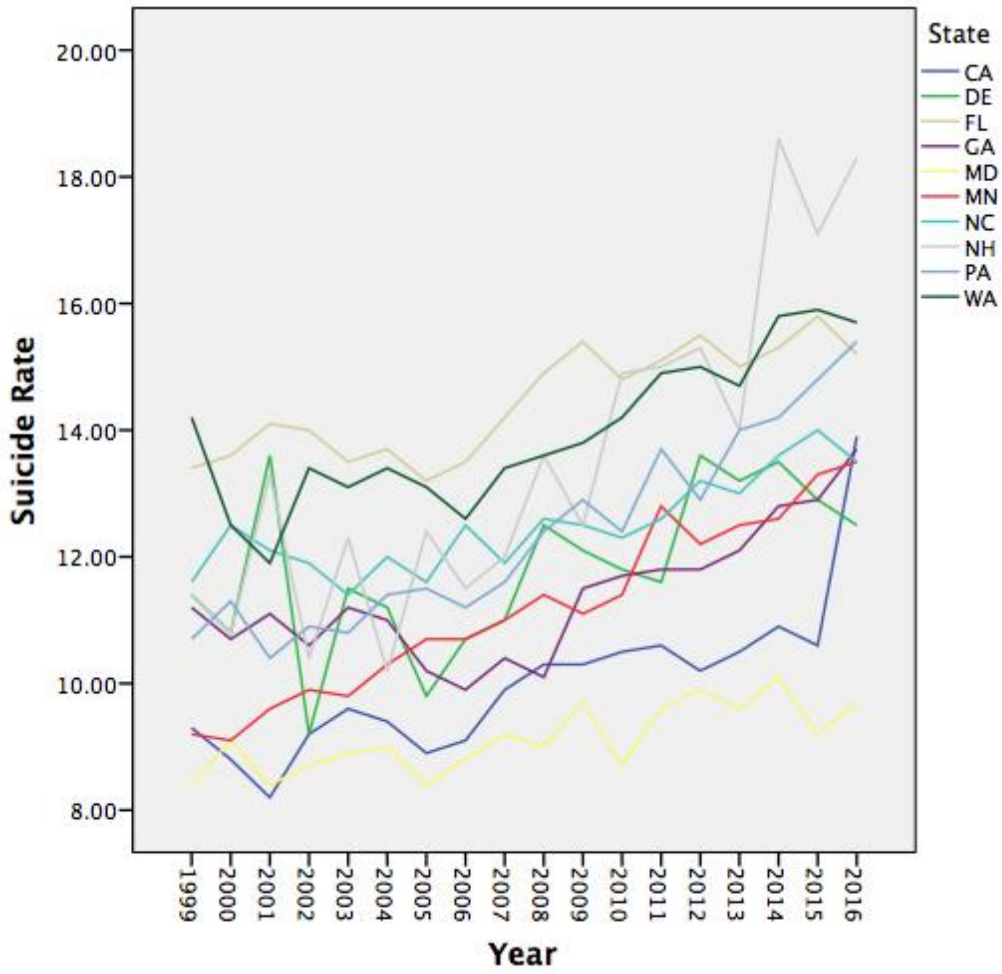

Figure 11. Suicide rate over time.

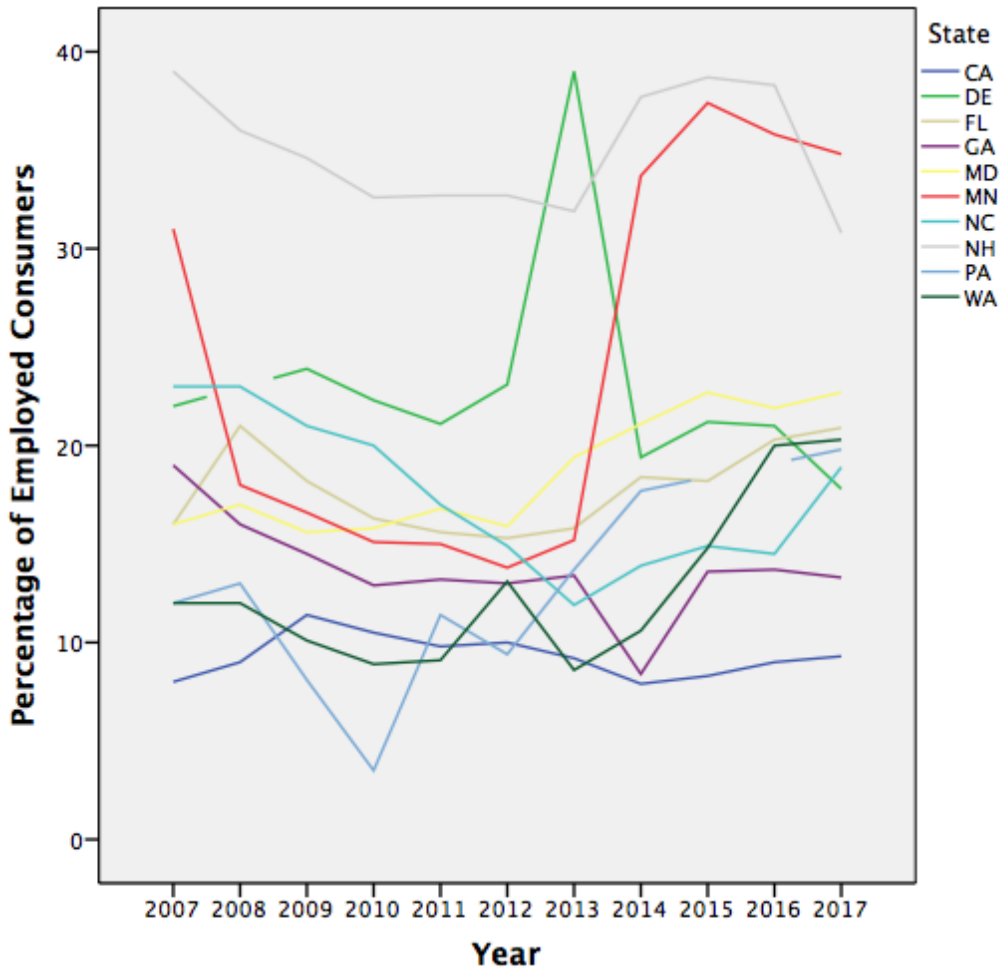

Figure 12. Percentage of employed consumers over time.

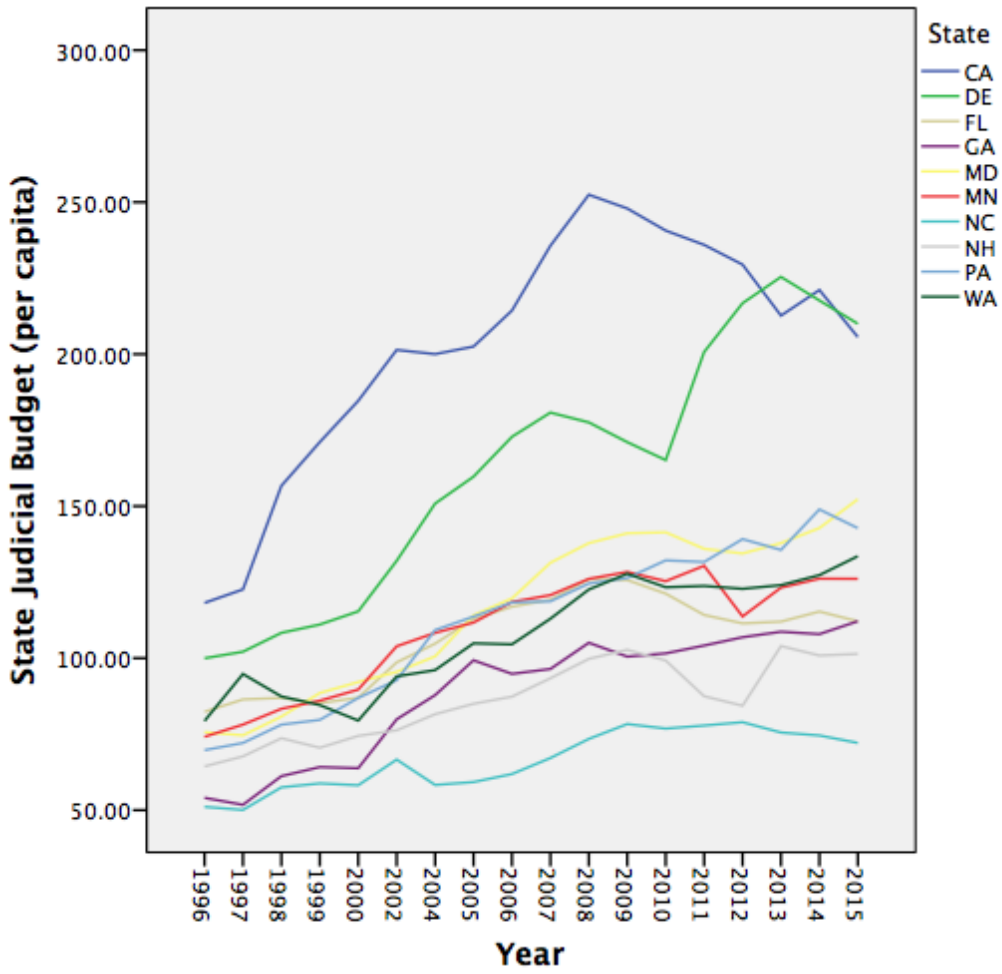

Figure 13. State judicial budget per capita rates over time.

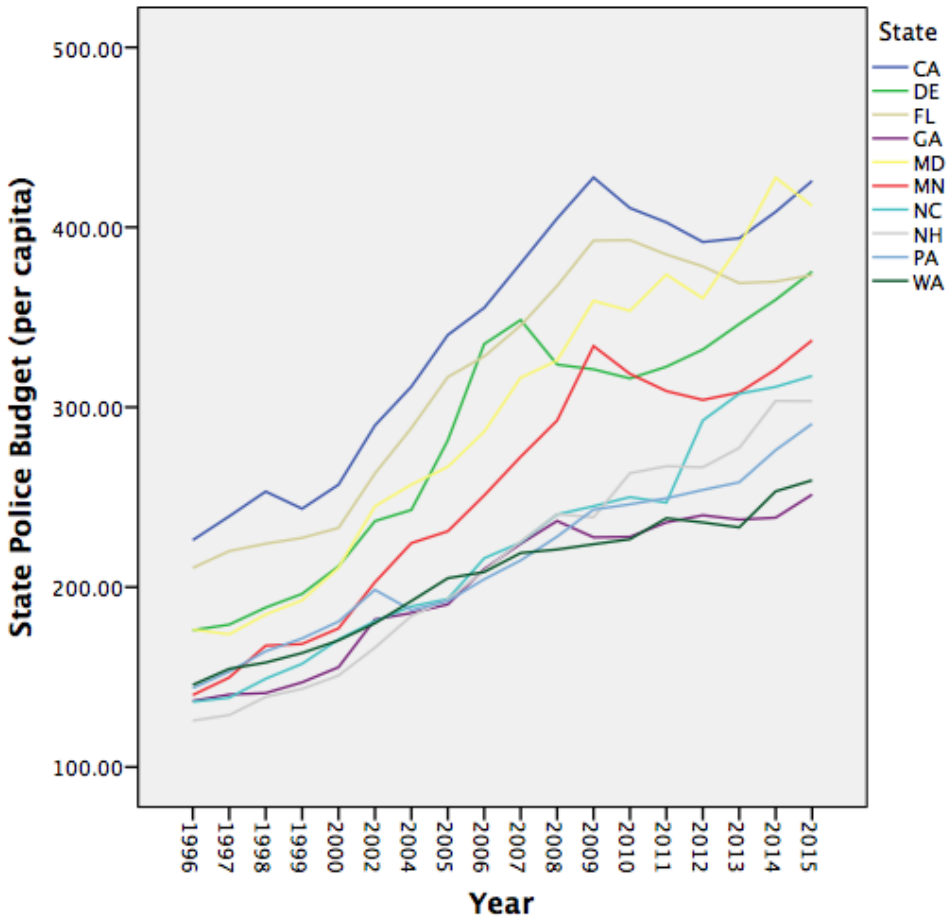

Figure 14. State police budget per capita rates over time.

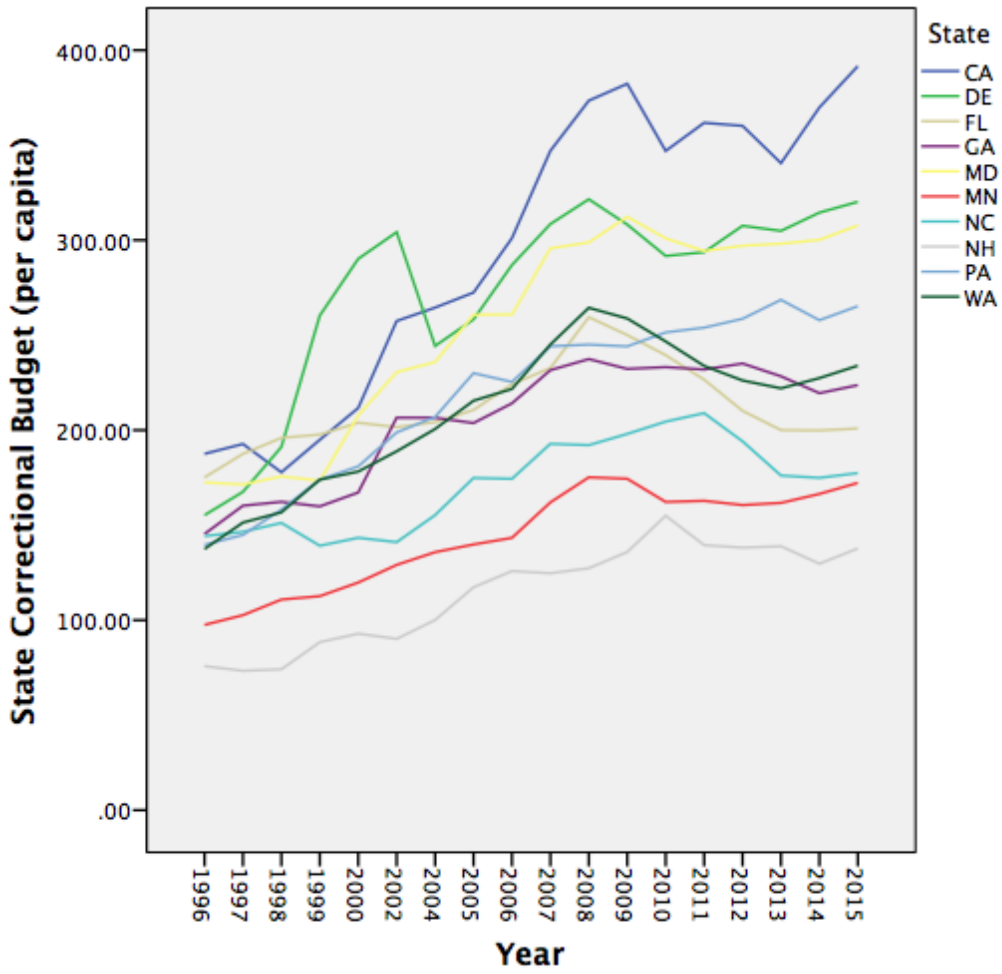

Figure 15. State correctional budget per capita rates over time.

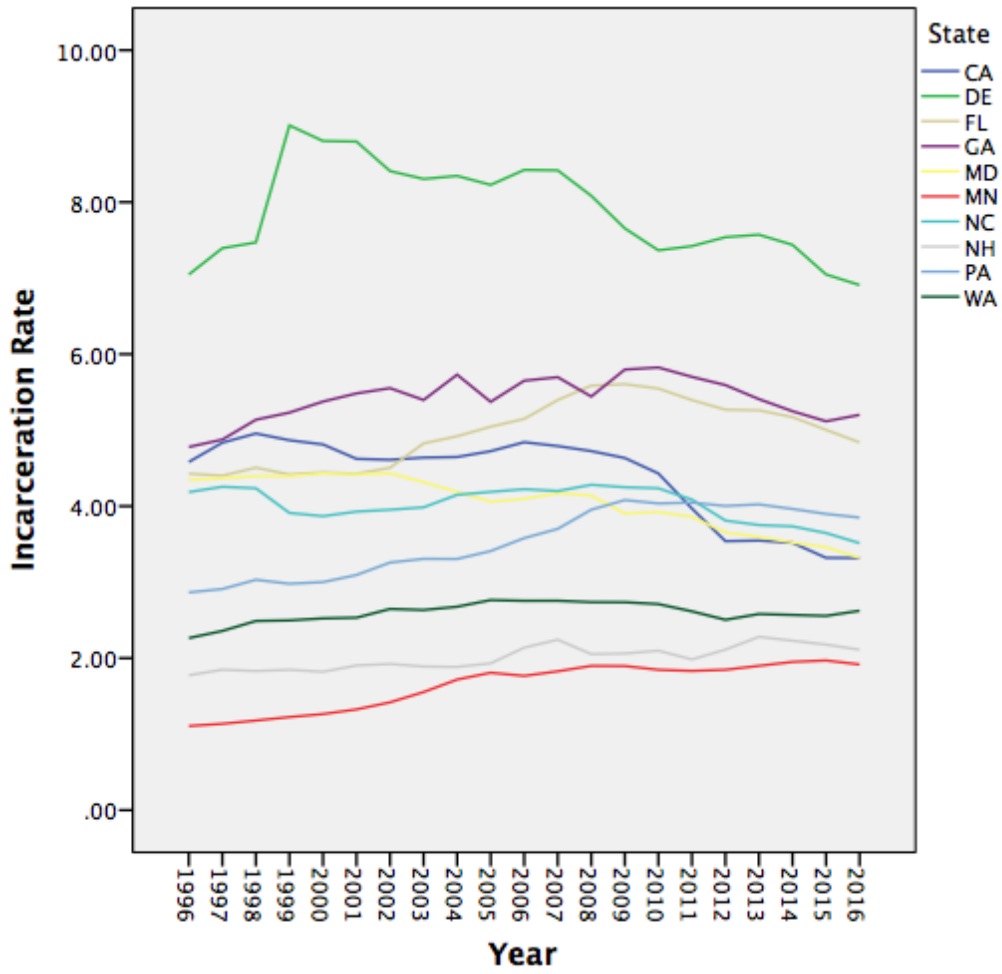

Figure 16. Incarceration rate over time.

Table 1. Side by side comparison of the language from the Americans with Disabilities Act of 1990, § 202 and from the Rehabilitation Act of 1973, § 504. Corresponding passages marked by matching underlining, italicizing, or bolding for ease of comparison.

"No otherwise qualified handicapped individual in the United States… *shall, solely by reason of his handicap,* **be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance**."	"No qualified individual with a disability *shall, by reason of such disability,* **be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity**."
The Rehabilitation Act of 1973, § 504	Americans with Disabilities Act of 1990, § 202

Table 2. Comparison of major terms of Department of Justice settlement agreements by state.

DOJ Services by State	Georgia (2010)	Delaware (2011)	North Carolina (2012)	New Hampshire (2013)
Target Population	DD & SMI (~9000 SMI) -Forensic status -Chronically homeless -Currently in SPH -Frequent SPH or ER admits -To be released inmates	SMI -Forensic status -Chronically homeless -Currently in SPH or private hospital -Frequent SPH or ER admits -Criminal justice involved	SMI -Adult Care Homes -SPH -Homeless or unstable housing -Diverted from adult care home due to this settlement	SMI -Adult care homes -SPH -Frequent SPH or ER admits -Criminal justice involvement due to mental health -Unable to get services in the community
Crisis Services	6 centers 3 res programs 35 hosp beds 18 apartments Hotline Mobile Unit-1 hr	2 centers 1 acute unit 4 apartments Hotline Mobile Unit-1 hr	Centers Acute units Hotline Mobile Unit-1 hr	4 apartments Mobile Unit-1 hr
Community Education	None	Police, Corrections, Hospitals on Crisis services Judges & Police on services for forensic pop	Police, Corrections, Hospitals on Crisis services	None

ACT	22 teams 7-10 members 10:1 clients Dartmouth	11 teams 7-10 members 10:1 clients Dartmouth	50 teams Dartmouth or TMACT	50 teams 10:1 (except psychiatrist)
Case Manage-ment	8 teams, 3-4 members, 20/30:1 14 intensive, 10 members, 20/30:1 45 individual, 1:50	4 intensive, 10 members 25:1 25 individual, 1:35	Community support teams and case management	None
Supported Housing	Up to 9000 50% scatter Bridge funding	All needs met All scatter Bridge funding	3000 slots, 2750 scatter site	600 slots, increase to prevent > 6 month wait, all scatter site, which is only 2 or 10% medically complex housing available, 16 each
Supported Employ-ment	550 EBP model	1100 SE 1100 rehab	2500 EBP	1000 Dartmouth
Family and Peer Supports	Peer - all in ACT & CSTs + 835	1000	Peer and Psychosocial Rehab	Family - yes Peer - 3 centers open 44 hrs/wk
Transition Planning	Each SPH gets a case manager and transition specialist	Every hospitalized person meets with a team with 5 days, then every 30 days, escalate case if not discharged,	Starts immediately, done within 90 days (escalated if not), disability cannot be a barrier to discharge,	Starts immediately, diverse team, list barriers and steps to overcome; post-transition visits by community providers to

		team includes a community provider	psychiatric advance directives, and crisis plans	check adjustment
Improper admissions	From SPH to ASL or SNF, unless medically required or "they were informed when they chose to do so"	None	People with SPMI to adult care homes; if they insist, must document efforts made and continue in-reach	People with SPMI to adult care homes; if they insist, must document efforts made and continue in-reach
Client/ Guardian Counseling	None	None	Provide visits to community providers, consults with current community clients, and monitor anyone who declines	Provide visits to community providers, consults with current community clients, and annually recontact anyone who declines
Quality Assurance	Annual review: In person interviews Records review Outcome data Network analysis - cost and availability	Community provider contracts are performance based; reviewed every other year; collect outcome variables; public annual report	Sufficient providers; QofL surveys; outcome variables for overall goals; public annual report	Sufficient providers, each reviewed every two years; performance-based contracts; assess common transition barriers & gaps in services

Table 3. Summary of case information.

Case Name	State	Year	Model	Outcome
US v. Georgia	Georgia	2010	DOJ	Settlement Agreement
US v. Delaware	Delaware	2011	DOJ	Settlement Agreement
US v. North Carolina	North Carolina	2012	DOJ	Settlement Agreement
US v. New Hampshire	New Hampshire	2013	DOJ	Settlement Agreement
Frederick L. v. Dept. of Public Welfare	Pennsylvania	2001	Third Circuit	Trial court ruling in favor of the state vacated and remanded by appellate court
Sanchez v. Johnson	California	2005	Ninth Circuit	Trial court ruling in favor of the state affirmed by appellate court
Arc of Washington State, Inc. v. Braddock	Washington	2005	Ninth Circuit	Trial court ruling in favor of the state affirmed by appellate court
Williams v. Wasserman	Maryland	2001	Ninth Circuit	Trial court ruling in favor of the state
Jensen v. Minnesota Dept. of Human Services	Minnesota	2011 (finalized in 2015)	Minnesota	Settlement Agreement
Johnson v. Murphy	Florida	2001	Florida	Trial court ruling in favor of the state

Table 4. Summary of *Olmstead* Response Types

***Olmstead* Response Type**	**States**	**Description**
Third	Pennsylvania	● Written ● Set dates by which an approximate number of people will be discharged from state hospitals ● Explicit discharge criteria ● "a general description of the collaboration required between the local authorities and the housing, transportation, care, and education agencies to effectuate integration into the community"
Ninth	California, Washington, Maryland	● Increases in funding for community services, including waiver programs, despite budget constraints ● Regular, personalized evaluations for readiness to transition and community services needed ● A general deinstitutionalization trend
DOJ	New Hampshire, North Carolina, Delaware, Georgia	● Intensive community service development, included crisis services, ACT teams, and other supportive services ● Process development for transition planning ● Quality assurance systems
Minnesota	Minnesota	● Intensive community service development, including affordable housing, supported employment, and mental health services ● Consumer choice among services ● Trend of deinstitutionalization ● Consumer input in development
Florida	Florida	● Discharge planning started at admission ● Coordination with community providers for discharge ● Typically no waiting list, most discharged 30-60 days from eligibility determination - delay was for coordination of services

Table 5. Dependent Variables, Covariates, and Data Sources.

Dependent Variable	Model	Data Source	Available at
Rate of people served in the state psychiatric hospital	1	NRI/SAMHSA data, 2001-2017	http://www.nri-incdata.org/ & https://www.samhsa.gov/data/
Per capita expenditures for community mental health services	2A	NRI/SAMHSA data, 1990, 1997, 2001-2007, 2009-2016	http://www.nri-incdata.org/ & https://www.samhsa.gov/data/
Per capita expenditures of the state psychiatric hospital	2B	NRI/SAMHSA data, 1990, 1997, 2001-2007, 2009-2016	http://www.nri-incdata.org/ & https://www.samhsa.gov/data/
Rate of people served by community mental health providers	3	NRI/SAMHSA data, 2001-2017	http://www.nri-incdata.org/ & https://www.samhsa.gov/data/
Percent of general population receiving disability benefits	4Ai	SSA Disability Claim Data, 2001-2015	https://catalog.data.gov/dataset/ssa-disability-claim-data
Filing rate for disability benefits	4Aii	SSA Disability Claim Data, 2001-2015	https://catalog.data.gov/dataset/ssa-disability-claim-data
Approval rate for disability benefits	4Aiii	SSA Disability Claim Data, 2001-2015	https://catalog.data.gov/dataset/ssa-disability-claim-data
Annual suicide rate	4B	CDC's National Vital Statistics System, 1999-2016	https://www.cdc.gov/nchs/nvss/index.htm
Readmission to any psychiatric hospital	4C	SAMHSA's Uniform Reporting System, 2007-2017	https://www.samhsa.gov/data/
Employed percentage of SMHA consumers	4D	SAMHSA's Uniform Reporting System, 2007-2017	https://www.samhsa.gov/data/
Per capita		BJS Justice	https://www.bjs.gov/index.cf

expenditures on judicial system	4Ei	Expenditure and Employment publication series, 1996-2015	m?ty=dcdetail&iid=286
Per capita expenditures on law enforcement	4Eii	BJS Justice Expenditure and Employment publication series, 1996-2015	https://www.bjs.gov/index.cfm?ty=dcdetail&iid=286
Per capita expenditures on corrections	4Eiii	BJS Justice Expenditure and Employment publication series, 1996-2015	https://www.bjs.gov/index.cfm?ty=dcdetail&iid=286
Rate of people incarcerated	4F	BJS National Prisoner Statistics Program, 1996-2016	https://www.bjs.gov/index.cfm?ty=dcdetail&iid=269
Per capita expenditures on total state budget	2A, 2B, 4Ei-4Eiii	BJS Justice Expenditure and Employment publication series, 1996-2015	https://www.bjs.gov/index.cfm?ty=dcdetail&iid=286

Table 6. Descriptive statistics for covariates and dependent variables in Hypotheses 1-4.

Model	*N*	Mean	S.D.	Range	Skew	Kurtosis
1 - SPH rate	153	.525	.404	.12-1.92	1.687	2.122
2A - Com Tx spending	164	82.47	58.103	11.19-281.43	1.199	1.525
2B - SPH spending	164	33.248	11.314	13.29-60.71	.326	-.594
3 - Com Tx rate	144	14.859	7.313	.88-33.02	.767	-.445
4Ai - disability benefits	150	5.41	.986	3.61-7.67	.32	-.657
4Aii - disability filing rates	150	1.191	.228	.72-1.71	.343	-.607
4Aiii - disability approval rates	150	36.554	8.73	23.84-66.22	1.032	.723
4B - suicide	180	12.031	2.076	8.2-18.6	.36	-.155
4C - readmission	55	9.92	6.392	0-40	2.404	8.946
4D - employment	107	18.48	8.489	4-39	.99	.256
4Ei - judicial spending	180	115.963	44.805	50.08-252.45	1.176	1.028
4Eii - LEO spending	180	253.95	78.074	125.8-427.7	.432	-.759
4Eiii - correctional spending	180	210.278	67.879	73.34-391.62	.399	-.229
4F - incarceration rate	210	4.048	1.775	1.11-9.01	.699	.282
Covariate - total state budget	129	8718.72	1872.86	4658-13123	-.038	-.666

Table 7. Effect of *Olmstead* response type on changes in hospitalization rates over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	-0.017	-0.082	.937
Ninth circuit - slope	.029	1.000	.346
DOJ - intercept	.074	.311	.764
DOJ - slope	-.057	-2.114	.067
Florida - intercept	.001	.003	.998
Florida - slope	.039	.864	.413
Third Circuit - intercept	-.153	-.482	.643
Third Circuit - slope	.022	.48	.644
Minnesota - intercept	-.007	-.021	.984
Minnesota - slope	.022	0.473	.649

Table 8. Effect of *Olmstead* response type on litigation impact on hospitalization rates growth rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit	.012	.606	.561
DOJ	**-.105**	**-7.623**	**<.001**
Florida	.03	1.139	.288
Third Circuit	-0.005	-.17	.87
Minnesota	.042	1.135	.289

Table 9. Final estimation of fixed effects for Model 1.

Fixed Effect	Coefficient	Standard	*t*-ratio	Approx.	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	0.257162	0.069993	3.674	9	0.005
For TIME slope, π_1					
INTRCPT2, β_{10}	-0.068159	0.022888	-2.978	9	0.016
For POSTLIT slope, π_2					
INTRCPT2, β_{20}	0.057059	0.026857	2.125	8	0.066
DOJ, β_{21}	-0.058886	0.017404	-3.383	8	0.010

Table 10. Correlations for dependent variables in models 2A & 2B. All correlations are significant ($p < .001$).

Models 2A & 2B	Community Tx PC	SPH PC	Total State PC
Community Tx PC	***	***	***
SPH PC	.764	***	***
Total State PC	-.286	-.485	***

Table 11. Effect of *Olmstead* response type on changes in the state per capita spending on community mental health over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	6.439	.131	.899
Ninth circuit - slope	.256	.127	.902
DOJ - intercept	-60.784	-1.455	.184
DOJ - slope	-2.746	-1.649	.138
Florida - intercept	-97.431	-1.42	.193
Florida - slope	-3.803	-1.338	.218
Third Circuit - intercept	**188.567**	**4.255**	**.003**
Third Circuit - slope	**7.353**	**3.797**	**.005**
Minnesota - intercept	54.576	.755	.472
Minnesota - slope	3.119	1.081	.311

Table 12. Effect of *Olmstead* response type on litigation impact on the growth rate of a state's per capita spending on community mental health. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - jump	.406	.022	.983
Ninth circuit - slope	-0.536	-0.541	.59
DOJ - jump	-37.834	-2.284	.052
DOJ - slope	**4.035**	**2.172**	**.032**
Florida - jump	-15.821	-.517	.619
Florida - slope	-.601	-.485	.629
Third Circuit - jump	53.651	1.982	.083
Third Circuit - slope	-1.425	-1.164	.247
Minnesota - jump	16.148	.57	.584
Minnesota - slope	3.046	.798	.427

Table 13. Final estimation of fixed effects for Model 2A.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	37.007326	42.427750	0.872	9	0.406
For TIME slope, π_1					
INTRCPT2, β_{10}	1.522745	1.530932	0.995	9	0.346
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	0.514873	0.827686	0.622	96	0.535
DOJ, β_{21}	4.040242	1.944383	2.078	96	0.040
For JUMP slope, π_3					
INTRCPT2, β_{30}	11.197716	11.825354	0.947	8	0.371
DOJ, β_{31}	-38.779687	17.940041	-2.162	8	0.063
For TOTSTPC slope, π_4					
INTRCPT2, β_{40}	0.008239	0.003277	2.514	96	0.014

Table 14. Effect of *Olmstead* response type on changes in the state per capita spending on the state psychiatric hospital over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	4.757	.549	.598
Ninth circuit - slope	.684	1.474	.179
DOJ - intercept	10.105	1.349	.214
DOJ - slope	.101	.213	.836
Florida - intercept	-18.026	-1.504	.171
Florida - slope	-.147	-.188	.856
Third Circuit - intercept	-8.348	-.649	.534
Third Circuit - slope	-1.017	-1.443	.187
Minnesota - intercept	-10.507	-.827	.432
Minnesota - slope	-.668	-.897	.396

Table 15. Effect of *Olmstead* response type on litigation impact on the state's per capita spending on the state psychiatric hospital. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - jump	**7.861**	**3.595**	**.007**
Ninth circuit - slope	.339	.825	.411
DOJ - jump	-1.976	-0.726	.488
DOJ - slope	-0.346	-0.436	.664
Florida - jump	-3.109	-.544	.601
Florida - slope	.635	1.042	.30
Third Circuit - jump	-2.736	-.484	.641
Third Circuit - slope	-.849	-1.506	.135
Minnesota - jump	**-8.833**	**-2.665**	**.029**
Minnesota - slope	**2.881**	**2.057**	**.042**

Table 16. Final estimation of fixed effects for Model 2B.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	37.245040	10.633127	3.503	9	0.007
For TIME slope, π_1					
INTRCPT2, β_{10}	0.305497	0.398239	0.767	9	0.463
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	-0.191288	0.306857	-0.623	96	0.535
MINN, β_{21}	2.770001	1.413458	1.960	96	0.053
For JUMP slope, π_3					
INTRCPT2, β_{30}	-2.334069	1.901595	-1.227	7	0.259
NINTH, β_{31}	6.301491	2.173770	2.899	7	0.023
MINN, β_{32}	-7.947018	3.239407	-2.453	7	0.044
For TOTSTPC slope, π_4					
INTRCPT2, β_{40}	-0.000142	0.000854	-0.167	96	0.868

Table 17. Effect of *Olmstead* response type on changes in community treatment rates over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	-4.324	-0.654	.532
Ninth circuit - slope	-0.134	-0.299	.773
DOJ - intercept	-5.024	-0.822	.435
DOJ - slope	-0.517	-1.324	.222
Florida - intercept	-9.019	-0.91	.389
Florida - slope	-0.356	-0.523	.615
Third Circuit - intercept	14.414	1.559	0.158
Third Circuit - slope	.71	1.091	.307
Minnesota - intercept	17.986	2.092	.07
Minnesota - slope	**1.311**	**2.399**	**.043**

Table 18. Effect of *Olmstead* response type on litigation impact on a state's community treatment growth rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - slope	.148	.725	.489
Ninth circuit - jump	-1.897	-1.00	.319
DOJ - slope	-.538	-1.628	.142
DOJ - jump	.112	.065	.948
Florida - slope	-.031	-.116	.91
Florida - jump	2.151	.684	.496
Third Circuit - slope	.26	.84	.425
Third Circuit - jump	1.173	.388	.699
Minnesota - slope	.74	1.549	.16
Minnesota - jump	4.597	1.634	.105

Table 19. Final estimation of fixed effects for Model 3.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	19.848541	3.057508	6.492	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	-0.108047	0.410245	-0.263	8	0.799
MINN, β_{11}	2.639673	1.115875	2.366	8	0.046
For POSTLIT slope, π_2					
INTRCPT2, β_{20}	0.452460	0.564740	0.801	8	0.446
MINN, β_{21}	-2.045298	1.735373	-1.179	8	0.272
For JUMP slope, π_3					
INTRCPT2, β_{30}	-2.130260	0.904915	-2.354	113	0.020

Table 20. Correlations for dependent variables in models 4Ai-4Aiii. All correlations are significant ($p < .001$).

Models 4Ai-4Aiii	% receiving benefits	Filing Rate	Approval Rate
% receiving benefits	***	***	***
Filing Rate	.764	***	***
Approval Rate	-.286	-.485	***

Table 21. Effect of *Olmstead* response type on changes in the percent of people receiving disability benefits over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	**-1.386**	**-2.866**	**.021**
Ninth circuit - slope	-.044	-1.644	.139
DOJ - intercept	0.975	1.85	.102
DOJ - slope	.036	1.402	.199
Florida - intercept	.072	.072	.944
Florida - slope	-0.024	-.53	.61
Third Circuit - intercept	1.71	2.04	.076
Third Circuit - slope	.04	.907	.391
Minnesota - intercept	-1.147	-1.235	.252
Minnesota - slope	-.01	-.214	.836

Table 22. Effect of *Olmstead* response type on litigation impact on a state's disability benefits growth rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - jump	**-.278**	**-2.925**	**.019**
Ninth circuit - slope	.048	2.098	.069
DOJ - jump	**.261**	**2.786**	**.024**
DOJ - slope	-.065	-2.208	.058
Florida - jump	-.221	-1.03	.333
Florida - slope	-.003	-.073	.943
Third Circuit - jump	.161	.718	.493
Third Circuit - slope	.043	1.265	.242
Minnesota - jump	.25	1.394	.201
Minnesota - slope	-.031	-.607	.561

Table 23. Final estimation of fixed effects for Model 4Ai.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	6.239522	0.313652	19.893	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	0.149022	0.019770	7.538	9	<0.001
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	-0.046256	0.021325	-2.169	9	0.058
For JUMP slope, π_3					
INTRCPT2, β_{30}	0.145100	0.083494	1.738	8	0.120
NINTH, β_{31}	-0.342450	0.091994	-3.723	8	0.006

Table 24. Effect of *Olmstead* response type on changes in the filing rate for disability benefits over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	-0.269	-2.028	.077
Ninth circuit - slope	-.013	-1.553	.159
DOJ - intercept	0.078	.533	.609
DOJ - slope	.0001	.007	.995
Florida - intercept	.293	1.314	.225
Florida - slope	.014	1.065	.318
Third Circuit - intercept	.0384	1.841	.103
Third Circuit - slope	.013	1.002	.346
Minnesota - intercept	-.254	-1.119	.296
Minnesota - slope	.002	.155	.881

Table 25. Effect of *Olmstead* response type on litigation impact on a state's disability benefits filing growth rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - jump	.032	.505	.614
Ninth circuit - slope	.005	.606	.546
DOJ - jump	-.038	-.549	.584
DOJ - slope	-.027	-1.522	.13
Florida - jump	.081	.743	.459
Florida - slope	.009	.872	.385
Third Circuit - jump	**.249**	**2.376**	**.019**
Third Circuit - slope	.006	.579	.564
Minnesota - jump	-.049	-.413	.68
Minnesota - slope	-.003	-.088	.93

Table 26. Final estimation of fixed effects for Model 4Aii.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	1.344303	0.074119	18.137	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	0.027969	0.006120	4.570	9	0.001
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	-0.013963	0.007700	-1.813	127	0.072
For JUMP slope, π_3					
INTRCPT2, β_{30}	-0.088821	0.032780	-2.710	127	0.008
THIRD, β_{31}	0.235764	0.107187	2.200	127	0.030

Table 27. Effect of *Olmstead* response type on changes in the percent of people being approved for disability benefits over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	0.836	.214	.836
Ninth circuit - slope	.256	.832	.43
DOJ - intercept	2.21	0.615	.556
DOJ - slope	-.055	-.185	.858
Florida - intercept	-3.698	-.631	.546
Florida - slope	.267	.555	.594
Third Circuit - intercept	-3.51	-.598	.567
Third Circuit - slope	-.47	-1.012	.341
Minnesota - intercept	-.635	-.106	.918
Minnesota - slope	-.248	-.517	.619

Table 28. Effect of *Olmstead* response type on litigation impact on the growth rate of people being approved for disability benefits. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - jump	-.392	-.209	.84
Ninth circuit - slope	.026	.10	.921
DOJ - jump	.842	.47	.651
DOJ - slope	.088	.182	.856
Florida - jump	-1.53	-.532	.609
Florida - slope	-.023	-.068	.946
Third Circuit - jump	-5.338	-2.118	.067
Third Circuit - slope	-0.492	-1.634	.105
Minnesota - jump	3.092	1.031	.333
Minnesota - slope	.707	.91	.365

Table 29. Final estimation of fixed effects for Model 4Aiii:

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	32.115060	2.003999	16.025	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	-1.025067	0.152514	-6.721	9	<0.001
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	0.422552	0.165851	2.548	119	0.012
For JUMP slope, π_3					
INTRCPT2, β_{30}	-0.735949	0.942719	-0.781	9	0.455

Table 30. Effect of *Olmstead* response type on changes in the state suicide rate over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	-1.94	-1.551	.16
Ninth circuit - slope	-.061	-.988	.352
DOJ - intercept	.591	.458	.659
DOJ - slope	.016	.263	.8
Florida - intercept	2.182	1.083	.31
Florida - slope	-.06	-.626	.549
Third Circuit - intercept	1.111	.529	.611
Third Circuit - slope	.088	.93	.38
Minnesota - intercept	-.341	-.16	.877
Minnesota - slope	.072	.756	.471

Table 31. Effect of *Olmstead* response type on differences in the degree to which litigation impacted a state's suicide rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - slope	.037	.585	.559
Ninth circuit - jump	-.891	-1.435	.189
DOJ - slope	-.011	-.104	.917
DOJ - jump	**1.726**	**3.725**	**.006**
Florida - slope	**-.214**	**-3.207**	**.002**
Florida - jump	-.844	-.853	.418
Third circuit - slope	.042	.495	.622
Third circuit - jump	-1.129	-1.172	.275
Minnesota - slope	.011	.058	.954
Minnesota - jump	**-1.965**	**-2.339**	**.047**

Table 32. Final estimation of fixed effects for Model 4B.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	13.777789	0.726402	18.967	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	0.125918	0.042367	2.972	9	0.016
For POSTLIT slope, π_2					
INTRCPT2, β_{20}	0.130907	0.045736	2.862	148	0.005
FLORIDA, β_{21}	-0.187113	0.053042	-3.528	148	<0.001
For JUMP slope, π_3					
INTRCPT2, β_{30}	-0.340885	0.348181	-0.979	7	0.360
DOJ, β_{31}	1.639002	0.552609	2.966	7	0.021
MINN, β_{32}	-0.667877	0.808642	-0.826	7	0.436

Table 33. Effect of *Olmstead* response type on changes in the state employment rate over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	-5.396	-.97	.36
Ninth circuit - slope	.312	.603	.563
DOJ - intercept	.01	.002	.999
DOJ - slope	**-1.168**	**-3.535**	**.008**
Florida - intercept	-1.139	-.128	.901
Florida - slope	-.065	-.081	.937
Third Circuit - intercept	-2.195	-.242	.815
Third Circuit - slope	.753	.933	.378
Minnesota - intercept	16.454	2.271	.053
Minnesota - slope	**1.72**	**3.004**	**.017**

Table 34. Effect of *Olmstead* response type on differences in the degree to which litigation impacted a state's employment rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - slope	-8.264	-1.188	.239
Ninth circuit - jump	-.488	-.546	.6
DOJ - slope	-0.02	-.008	.994
DOJ - jump	**-1.165**	**-3.324**	**.01**
Florida - slope	-3.312	-.294	.77
Florida - jump	-.753	-.569	.585
Third circuit - slope	-4.649	-.411	.683
Third circuit - jump	.12	.088	.932
Minnesota - slope	.189	.051	.959
Minnesota - jump	**1.999**	**3.732**	**.006**

Table 35. Final estimation of fixed effects for Model 4D.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	18.629480	4.055918	4.593	9	0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	-1.395262	0.602288	-2.317	9	0.046
For JUMP slope, π_2					
INTRCPT2, β_{20}	2.151445	0.661954	3.250	7	0.014
DOJ, β_{21}	-0.902142	0.428759	-2.104	7	0.073
MINN, β_{22}	1.739253	0.510765	3.405	7	0.011
For POSTLIT slope, π_3					
INTRCPT2, β_{30}	1.946639	1.853417	1.050	76	0.297

Table 36. Correlations for covariates and dependent variables in models 4Ei-4Eiii. All correlations are significant ($p < .001$).

Models 4Ei-4Eiii	Total State Budget	Police Budget	Judicial Budget	Corrections Budget
Total State Budget	***	***	***	***
Police Budget	.767	***	***	***
Judicial Budget	.752	.749	***	***
Corrections Budget	.695	.717	.808	***

Table 37. Effect of *Olmstead* response type on changes in the judicial budget over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	36.57	1.31	.227
Ninth circuit - slope	-.14	-.188	.856
DOJ - intercept	-21.19	-.772	.463
DOJ - slope	.421	.612	.558
Florida - intercept	-16.677	-.363	.726
Florida - slope	-.685	-.606	.561
Third Circuit - intercept	-.104	-.002	.998
Third Circuit - slope	.442	.389	.707
Minnesota - intercept	-12.33	-.268	.796
Minnesota - slope	-.583	-.519	.618

Table 38. Effect of *Olmstead* response type on litigation impact on the growth rate of a state's spending trajectory for the judiciary. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - jump	4.528	.5	.63
Ninth circuit - slope	-.716	-.502	.629
DOJ - jump	6.992	.861	.414
DOJ - slope	.361	.188	.856
Florida - jump	13.445	.988	.352
Florida - slope	-3.31	-1.909	.093
Third Circuit - jump	-4.003	-.272	.792
Third Circuit - slope	1.787	.87	.409
Minnesota - jump	-26.156	-1.964	.085
Minnesota - slope	.772	.236	.819

Table 39. Final estimation of fixed effects for Model 4Ei.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	115.375776	10.281684	11.221	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	1.361884	0.764618	1.781	9	0.109
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	-1.433964	1.447019	-0.991	9	0.348
For JUMP slope, π_3					
INTRCPT2, β_{30}	4.394083	4.924145	0.892	9	0.395
For TOTSTPC slope, π_4					
INTRCPT2, β_{40}	0.008873	0.001344	6.602	139	<0.001

Table 40. Effect of *Olmstead* response type on changes in the police budget over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	31.144	.765	.466
Ninth circuit - slope	-.79	-.536	.607
DOJ - intercept	-37.83	-1.014	.34
DOJ - slope	.389	.281	.786
Florida - intercept	94.447	1.672	.133
Florida - slope	2.815	1.345	.216
Third Circuit - intercept	-76.93	-1.301	.229
Third Circuit - slope	-3.604	-1.84	.103
Minnesota - intercept	10.51	.165	.873
Minnesota - slope	1.574	0.713	.496

Table 41. Effect of *Olmstead* response type on litigation impact on the growth rate of a state's spending trajectory for the police. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - slope	-.784	-.683	.496
Ninth circuit - jump	2.562	.175	.866
DOJ - slope	2.916	1.251	.213
DOJ - jump	9.532	.671	.521
Florida - slope	.06	.041	.967
Florida - jump	-3.734	-.165	.873
Third circuit - slope	.076	.052	.958
Third circuit - jump	-35.57	-1.821	.106
Minnesota - slope	3.969	.963	.337
Minnesota - jump	-26.858	-1.094	.306

Table 42. Final estimation of fixed effects for Model 4Eii.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	107.361425	31.371188	3.422	9	0.008
For TIME slope, π_1					
INTRCPT2, β_{10}	3.628343	1.100376	3.297	9	0.009
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	-1.120258	0.769212	-1.456	148	0.147
For JUMP slope, π_3					
INTRCPT2, β_{30}	3.954319	7.641481	0.517	9	0.617
For TOTSTPC slope, π_4					
INTRCPT2, β_{40}	0.021448	0.002431	8.821	148	<0.001

Table 43. Effect of *Olmstead* response type on changes in the per capita rate of correctional spending over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	78.963	2.218	.057
Ninth circuit - slope	1.826	2.001	.08
DOJ - intercept	-34.075	-.872	.408
DOJ - slope	-.29	-.294	.776
Florida - intercept	-18.994	-0.286	.782
Florida - slope	-2.322	-1.57	.155
Third Circuit - intercept	14.429	.218	.833
Third Circuit - slope	.479	.3	.772
Minnesota - intercept	-88.845	-1.484	.176
Minnesota - slope	-1.649	-1.093	.306

Table 44. Effect of *Olmstead* response type on litigation impact on the growth rate of a state's correctional spending trajectory. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - slope	-.44	-.458	.647
Ninth circuit - jump	**42.311**	**4.548**	**.002**
DOJ - slope	-1.676	-.625	.533
DOJ - jump	-25.529	-2.073	.072
Florida - slope	-1.258	-1.207	.229
Florida - jump	-17.593	-.747	.476
Third circuit - slope	**2.218**	**2.072**	**.04**
Third Circuit - jump	1.395	.05	.956
Minnesota - slope	6.79	1.463	.146
Minnesota - jump	-17.697	-.88	.405

Table 45. Final estimation of fixed effects for Model 4Eiii

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	5.898549	33.394996	0.177	9	0.864
For TIME slope, π_1					
INTRCPT2, β_{10}	-0.195836	1.008736	-0.194	9	0.850
For POSTLITS slope, π_2					
INTRCPT2, β_{20}	-3.626070	0.699438	-5.184	147	<0.001
THIRD, β_{21}	1.963789	1.070871	1.834	147	0.069
For JUMP slope, π_3					
INTRCPT2, β_{30}	-4.693997	5.042134	-0.931	8	0.379
NINTH, β_{31}	42.392700	9.538792	4.444	8	0.002
For TOTSTPC slope, π_4					
INTRCPT2, β_{40}	0.022106	0.002730	8.097	147	<0.001

Table 46. Effect of *Olmstead* response type on changes in the incarceration rate over time. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - intercept	-1.13	-1.09	.308
Ninth circuit - slope	**-.06**	**-2.33**	**.048**
DOJ - intercept	1.166	1.218	.258
DOJ - slope	-0.014	-0.476	.647
Florida - intercept	1.554	.97	.36
Florida - slope	.054	1.195	.266
Third Circuit - intercept	.156	.093	.928
Third Circuit - slope	.072	1.691	.129
Minnesota - intercept	-2.182	-1.429	.191
Minnesota - slope	.05	1.083	.311

Table 47. Effect of *Olmstead* response type on litigation impact on the growth of a state's incarceration rate. Significant results bolded.

Degrees of Freedom = 8	Coefficient	*t*	*p*
Ninth circuit - slope	-.033	-1.06	.32
DOJ - slope	-.062	-1.563	.157
Florida - slope	.117	1.807	.108
Third Circuit - slope	.119	1.854	.101
Minnesota - slope	-.014	-.213	.837

Table 48. Final estimation of fixed effects for Model 4F.

Fixed Effect	Coefficient	Standard error	*t*-ratio	Approx. *d.f.*	*p*-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	3.832945	0.502542	7.627	9	<0.001
For TIME slope, π_1					
INTRCPT2, β_{10}	0.040431	0.012355	3.273	9	0.010
For POSTLIT slope, π_2					
INTRCPT2, β_{20}	-0.108038	0.023800	-4.539	9	0.001

Table 49. Summary of Results for Hypotheses 1-4.

Model Number. Dependent Variable (Years)	**Growth Curve Model**		**Piecewise Growth Curve Model**		
	Trend for all states on average over all observed years	**Trends over all observed years for specific *Olmstead* response types**	**Pre-litigation trends**	**Post-litigation trends for all states on average**	**Post-litigation trends for specific *Olmstead* response types**
1. Number of people served in the state psychiatric hospital in the past year per 1000 members of the state general population (2001-2017)	Each year, there was a decrease of .032 instances per 1000 people, with the average in 2017 being .276	No significant differences, although DOJ approached a significantly faster deinstitution - alization rate (β = -.057, p = .067)	Each year, there was a decrease of .054 instances per 1000 people on average across states	After litigation, this pace slowed significantly; there was an annual decrease of .022 instances per 1000 people; no jump	Non-DOJ states: decrease of .068 instances per year and slowed, almost significantl y, after litigation DOJ states: did not slow after litigation
2A. Per capita expenditures for community mental health services (1990, 1997, 2001-2007, 2009-2016)	Each year, states increased spending by $3.93, for an average in 2016 of $119.78; when the total state budget is controlled for, time was not a significant predictor	Each year, the Third Circuit increased its spending by $7.35 more than the other states	After controlling for the total budget, there was no change over time prior to litigation	No significant changes on average post-litigation	DOJ increased its spending $4.04 more than other states post-litigation

2B. Per capita expenditures of the state psychiatric hospital (1990, 1997, 2001-2007, 2009-2016)	Time and total state budget were significant predictors individually, but when modeled together, neither had unique predictive utility	No significant differences	Time and total state budget were not predictive when modeled together	No significant changes on average post-litigation	Ninth: immediate increase after litigation Minnesota: immediate decrease after litigation, then annually increased funding more than other states (p = .053)
3. Number of people served by community mental health providers in the past year per 1000 members of the state general population (2001-2017)	Each year, there was an increase of .436 instances per 1000 people, with the average in 2017 being 18.14	Minnesota grew its rate of people receiving mental health services in the community faster than other states, by 1.31 instances per year	Each year, there was an increase of .633 instances per 1000 people on average across states; however, this average increase was driven solely by Minnesota (2.64 increase per year; other states together had no significant annual increase when controlling	On average, states continued to not significantly change; however, there was an immediate decrease of 2.576 instances per 1000 the year after litigation	Minnesota's rate of growth slowed, but not significantly

			for Minnesota)		
4Ai. % of general population receiving disability benefits (2001-2015)	Each year, there was an increase of .13%, with the average in 2015 being 6.32%	The Ninth Circuit had a 1.39% lower rate in 2015, as compared to the other states	Each year, there was an increase of .14% on average across states	After litigation, this rate slowed on average, almost significantly (β = -.046, p = .058)	The Ninth Circuit's slope after litigation did not vary, but there was a significant jump down the year after litigation (β = -.343)
4Aii. Filing rate for disability benefits (2001-2015)	Each year, there was an increase of .015, with the average in 2015 being 1.299	No significant differences	Each year, on average across states, there was an increase of .025	The pre-litigation pace significantly slowed after litigation, by .0167	The Third Circuit had a significant jump up in filing rate immediatel y after litigation
4Aiii. Approval rate for disability benefits (2001-2015)	Each year, there was a decrease of .82%, with the average in 2015 being 30.84%.	No significant differences	Each year, on average across states, there was a decrease of 1.03%	The prelitigation decreasing pace significantly slowed after litigation to .61% decreases each year	No significant differences
4B. Annual suicide rate per 100,000 members of the general population (1999-2016)	Each year, there was an increase of .19, with the average in 2016 being 13.65	No significant differences	No significant annual change	Each year, there was an increase of .21	Florida's annual increase slowed significantl y, but DOJ states quickened significantl

					y
4C. Readmission to any psychiatric hospital within 30 days of discharge from the state psychiatric hospital (2007-2017)	Insufficient data to run a model				
4D. Employed percentage of SMHA consumers (includes those "not in the workforce," e.g., on disability benefits) (2007-2017)	Each year, there was an increase of .3%, with the average in 2017 being 20.05%	DOJ saw decreasing rates of employment, while Minnesota saw increases much higher than other states	No annual change	No annual change	DOJ had an almost significantly immediate decrease in employment post-litigation while Minnesota had a significant immediate increase
4Ei. Per capita expenditures on judicial system (1996-2015)	Grew slower than the state total budget	No significant differences	Grew at the same rate as the total state budget	Slowed significantly	No significant differences
4Eii. Per capita expenditures on law enforcement (1996-2015)	Grew faster than the total state budget	No significant differences	Grew faster than what would be expected given the growth in total state budget	Did not vary significantly from the pre-litigation trend	No significant differences

4Eiii. Per capita expenditures on corrections (1996-2015)	Grew slower than the total state budget	No significant differences	Grew as would be expected given the total state budget	Significantly slowed	Third Circuit spending did not slow as much as the other states ($p = .069$) while the Ninth Circuit had a significant immediate increase
4F. Number of people incarcerated per 1000 members of the state general population (1996-2016)	No significant annual change, with an average in 2016 of 4.06	Ninth Circuit actually showed a decrease over all years	Each year, there was an average increase of .048	This significantly slowed, so each year there was an average annual decrease of .06	No significant differences

Table 50. Total numbers and percentages of missing data by *Olmstead* response type and dependent variable.

Dependent Variable (# of years observed)	Ninth Circuit	Third Circuit	DOJ	Florida	Minnesota	Totals
SPH hospitalization (17)	3 (5.88%)	1 (5.88%)	10 (14.71%)	2 (11.8%)	2 (11.77%)	18 (10.6%)
SPH spending (17)	1 (1.96%)	1 (5.88%)	2 (2.94%)	2 (11.8%)	0 (0%)	6 (3.5%)
Community Tx spending (17)	1 (1.96%)	1 (5.88%)	2 (2.94%)	2 (11.8%)	0 (0%)	6 (3.5%)
Community Tx (17)	7 (13.73%)	2 (11.77%)	11 (16.18%)	3 (17.7%)	3 (17.7%)	26 (15.3%)
Disability benefits (15)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Disability filing (15)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Disability approval (15)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Suicide rate (17)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Rehospitalization rate (11)	15 (45.46%)	6 (54.55%)	27 (61.36%)	5 (45.5%)	2 (18.18%)	55 (50%)
Employment rate (11)	0 (0%)	2 (18.18%)	1 (2.3%)	0 (0%)	0 (0%)	3 (2.7%)
Judicial spending (20)	6 (10%)	2 (10%)	8 (10%)	2 (10%)	2 (10%)	20 (10%)
Police spending (20)	6 (10%)	2 (10%)	8 (10%)	2 (10%)	2 (10%)	20 (10%)

Correctional spending (20)	6 (10%)	2 (10%)	8 (10%)	2 (10%)	2 (10%)	20 (10%)
Incarceration rate (21)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Totals (233)	47 (6.72%)	19 (8.16%)	77 (8.26%)	20 (8.58%)	12 (5.15%)	174 (7.48%)