The Price of Protection:
A Cost-Benefit Analysis of Involuntary Commitment Policy

Andy Tuholski, Ph.D.

Author Note

Correspondence concerning this article should be addressed to Prof. Tuholski at andy.tuholski@gmail.com

Abstract

Involuntary commitment has become an important policy objective throughout the United States and in much of the world as well. The stated policy justification for involuntary commitment typically involves protecting not only the safety of a potentially mentally ill individual, but also the safety of people who might otherwise be threatened by such an individual if he or she were not subjected to involuntary commitment. To date, arguments for and against these positions have been rooted in qualitative methods and approaches. However, in light of recent quantifications of (a) the value of life, (b) daily economic productivity, (c) the costs of involuntary commitment, and (d) the costs of crime, it is possible to take a more formal cost-benefit approach to weighing the benefits and disadvantages of involuntary commitment against each other. This study finds that there appears to be an empirical basis to retain involuntary commitment. This conclusion was lent context by a literature review of the history and contemporary dynamics of involuntary commitment, with special emphasis on the state of New York.

The Price of Protection:

A Cost-Benefit Analysis of Involuntary Commitment Policy

In the United States, as in other countries, involuntary commitment is an enormously contentious issue (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey, Geller, & Roth, 1987; Phelan & Link, 1998; Silver, Fisher, & Silver, 2015; W. P. Sullivan, Carpenter, & Floyd, 2014; Swanson, Swartz, Elbogen, Wagner, & Burns, 2003; Watson, Bowers, & Andersen, 2000). The state's ability to detain individuals in psychiatric facilities against their will has been framed as a clash between mental hygiene requirements versus individual liberties, a clash that has been imperfectly resolved by policy (Cavaiola & Dolan, 2016; Durham & La Fond, 2015; Gourevitch, Brichant-Petitjean, Crocq, & Petitjean, 2013; Player, 2015).

The legacy of involuntary commitment, which dates back to the formation of mental hospitals in the eighteenth century, is partly one of bad science and partly outright abuse, given the history of lobotomies and other unconscionable procedures in such institutions (Feldman & Goodrich, 2001; Greenblatt, 1959; J. Johnson, 2009; Kucharski, 1984; LaFond & Dunham, 1992; Levine, LaFond, & Durham, 1995; Rothman, 1971). However, in the twentieth century, the establishment of psychiatry as a distinct medical science created an opportunity for the mental hospital to promote genuine mental hygiene. The discovery of anti-psychotic medications in the 1950s (Feldman & Goodrich, 2001; Greenblatt, 1959; J. Johnson, 2009; Kucharski, 1984), refinements in neuroanatomical knowledge of brain disease (Binder, 2009; Gavarró & Salmons, 2013; Tesak & Code, 2008), and topical advances in psychology (Koriat, Goldsmith, & Pansky,

2000; Mertens, 2009; Ornstein, 1970; Warner, 2004) all combined to make mental hospitals places of healing rather than the places of torture and confinement they had often been during the eighteenth and nineteenth centuries (LaFond & Dunham, 1992; Levine et al., 1995; Rothman, 1971).

In the United States, the era of widespread involuntary commitment ended with deinstitutionalization (Dear & Wolch, 2014; Mechanic & Rochefort, 1990; Shadish, Lurigio, & Lewis, 1989). In the 1960s, a combination of public disenchantment and changing governmental funding of mental health resulted in the closing of hundreds of dedicated mental hospitals. For much of the 1960s and 1970s, the paradigm that prevailed was one of release into the community coupled with the administration of anti-psychotic medications (Aviram, 1990; Cutler, Bevilacqua, & McFarland, 2003; Drake, Green, Mueser, & Goldman, 2003; Humphreys & Rappaport, 1993a; Okin, 1984; Sharfstein, 2014). By the 1980s, Americans had soured on this approach, and President Ronald Reagan ended funding for community mental health centers (Humphreys & Rappaport, 1993b). At this point in its history, the United States was largely denuded of dedicated, inpatient-oriented mental hospitals and also devoid of the community mental health centers, leading to an outpatient-oriented approach to mental health (Beck & Maruschak, 2001; Sharfstein, 2014; Stuart & Arboleda-Flórez, 2014; Witvliet, Phipps, Feldman, & Beckham, 2004). In this new approach, only the most grievously impaired patients could expect long-term housing in a mental hospital; the remainder of the mentally ill population would be admitted on an outpatient basis, with outpatient services remaining popular in contemporary mental health treatment (Baker-Ericzén, Jenkins, & Haine-Schlagel, 2013; de Haan, Boon, de Jong, Hoeve, & Vermeiren, 2013; Leong, 1994;

Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004; Padgett, Patrick, Burns, & Schlesinger, 1994; Pottick, Warner, Vander Stoep, & Knight, 2014).

The debut of the outpatient era in American mental health practice and policy did not mean the end of involuntary commitment. The end of community mental health funding in the 1980s, coupled with the precipitous decline in mental hospitals that began in the 1960s, meant that many mentally ill Americans were now on the streets (Bassuk, Richard, & Tsertsvadze, 2015; Dear & Wolch, 2014; Gelberg, Linn, & Leake, 1988; Jones, 2015; Levinson, 2004; Marcus, 2006; Min, 1999; O'Flaherty, 1996; Roos et al., 2014; Rosenheck, Gallup, & Leda, 1991). The public was increasingly exposed to this mentally ill population, members of which were disproportionately likely to commit crimes (Peterson, Skeem, Kennealy, Bray, & Zvonkovic, 2014). In the 1980s, this trend contributed to a hardening of public attitudes against the indigent mentally ill.

By the 1990s, the increasing number of crimes committed by the indigent mentally ill contributed to changes in policies—at both the state and federal levels—pertaining to involuntary commitment. In 1999, a schizophrenic patient named Andrew Goldstein, then off his medications, pushed Kendra Webster into the path of an upcoming subway train, killing her instantly. This act, among others, galvanized lawmakers into passing Kendra's Law (Hopper, 2013; Link & Hatzenbuehler, 2016; Player, 2015; Saks, 2016; Sharfstein, Lieberman, & Talbott, 2016). Kendra's Law was instrumental in creating a basis for assisted outpatient treatment in New York state (Hopper, 2013; Link & Hatzenbuehler, 2016; Player, 2015; Saks, 2016; Sharfstein et al., 2016). New York's existing Mental Hygiene Law already created a basis for involuntary commitment (Williams, Cohen, & Ford, 2014). The passage of Kendra's Law signaled New York's

commitment to an even more aggressive policy framework for involuntary commitment, a framework that has been heavily influenced by the general public's desire for safety from crimes committed by the un-hospitalized, un-medicated mentally ill (Hopper, 2013; Link & Hatzenbuehler, 2016; Player, 2015; Saks, 2016; Sharfstein et al., 2016).

However, there has also been a great deal of criticism of involuntary commitment, both in New York and elsewhere, as constituting a violation of the civil rights of the individual who is committed (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P. Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000). Such criticism relies on several points. Most importantly, involuntary commitment is a process that is not as conscientiously governed as the process of criminal arrest (Swanson et al., 2016). Individuals who are arrested have the right to a rapid arraignment, failing which they are released. Individuals who are arrested are also, in the United States, Mirandized (Rogers et al., 2013). Involuntarily committed individuals, while possessed of their own distinct set of rights, can be held for a substantial period of time, with limited or no legal recourse at different points in the incarceration process (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P. Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000). In addition, numerous involuntarily committed patients have also complained of coercive treatments and unethical psychiatric staff behavior (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P. Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000).

The purpose of the cost-benefit analysis (CBA) and accompanying analysis presented in this article is to weigh the overall advantages and disadvantages of involuntary commitment in the state of New York—although the CBA methods demonstrated here can be applied to any state with equal validity. Involuntary commitment presents an intriguing basis for a CBA given (a) the contentiousness of arguments for and against involuntary commitment and (b) the existence of numerous and rich data for both costs and benefits.

Literature Review

The literature review has been divided into a number of distinct components. First, involuntary commitment has been discussed in a historical context dating back to Tudor England. Second, involuntary commitment has been discussed with specific reference to the United States. Third, the role of deinstitutionalization has been considered. Fourth, factors specific to New York have been considered. Fifth, gaps in the literature have been noted.

The Emergence of the Paradigm of Involuntary Commitment

While the concept of criminal incarceration appears to be nearly as old as civilization, the concept of involuntary commitment is much newer; in fact, even a conceptual basis for involuntary commitment did not exist until at least the 16th century. It was in the 16th century that mental illness was defined as part of a politico-legal regime and the mentally ill themselves became subject to strict governance (Foucault, 1988). Henry VIII was particularly influential in this regard: "Prior to the establishment of the Court of Wards and Liveries by Henry VIII...the jurisdiction over Idiots and Lunatics was entrusted to the Lord Chancellor...[they were] afterwards transferred to the...*Secretary of*

Lunatics" (Scargill-Bird, 1908, p. 57).

The policy groundwork laid in England and other European countries in the 16th century provided a basis for holding the mentally ill against their will, in the interests of the state. This innovation was a departure from an era in which the mentally ill were considered touched by a divine force and therefore exempted from many social or political consequences. When mental illness entered the domain of policy in the 16th century, the framework and justification for involuntary commitment had been prepared, with the underlying motivation being the need to extend regimes of regulation to the maximum number of citizens.

It is instructive to note that, at around the same time that Henry VIII was integrating the regulation of mentally ill people into the state apparatus, England was also defining its lands in a manner that eroded the concept of the Commons and, indeed, of private ownership. Under Henry VIII, the state was redefined as the owner of all land, resulting in what Trevelyan referred to as an economy of enclosure (Trevelyan, 2002). Just as land was coming more firmly under state control, so were people—including mentally ill people, who were not exempt from the spreading regime of regulation. Involuntary commitment could only make conceptual sense in a legal and political environment in which people's bodies—like people's lands—were no longer truly their own, but rather the state's property. Although institutions such as Bedlam Hospital existed before the 16th century, it seems that the 16th century was an inflection point in the emergence of intensive regulation governing the mentally ill and therefore of the recognizably modern concept of involuntary commitment.

The concept of involuntary commitment in dedicated mental hospitals thus relied

upon the framework of human regulation that, according to Foucault (Foucault, 1988), spread throughout Europe in the 16th century and that, in England, coincided with the state's aggressive assertion of property rights. Thus, the concept of involuntarily committing the mentally ill for the protection of the neurotypical population was not the initial justification for the nascent mental health system in countries such as England and France (Foucault, 1988). Rather, mental hospitals and the concept of involuntary commitment became a means of regulating and controlling dangerous bodies (Foucault, 1988).

Mentally ill people had, for centuries, enjoyed a certain license and remained outside the domain of political control; in the 16th century, this license was rescinded through policies that interposed the state as the ultimate manager of the mentally ill, as related by Foucault (1988). However, it was not until the 19th century that public fear of crimes committed by the mentally ill appears to have risen. At this point in the Industrial Revolution, cities were growing exponentially in size, leading to an increase both in general crime and crime committed by the mentally ill (Schwab, 2013; Walton, 1979). Cities juxtaposed people of many different classes, social backgrounds, beliefs, and mental states (Schwab, 2013; Walton, 1979). In an era of rural population bases, the mentally ill were closely embedded in a social context; small rural communities were familiar with their mentally ill populations, and these populations had been integrated into a social status quo that provided an informal means of regulating the mentally ill (Foucault, 1988). In cities, and in conjunction with the regulatory revolution of the 16th century, this regime of informal control was no longer viable. In the industrial city of the late 19th century, the mentally ill were more readily perceived as threats because of their

lack of integration with the people and social regime around them (Schwab, 2013). Thus, crimes committed by the mentally ill during this era, and in the context of growing cities, were of a more destabilizing character (Schwab, 2013).

Involuntary Commitment in the United States

The history of involuntary commitment in the United States is, in comparison to English and French policy, fairly recent. The key developments in involuntary commitment in the United States took place in the 19th century. At the beginning of the 19th century, there were few mental hospitals in the United States, with prominent examples being Pennsylvania Hospital in Philadelphia (Shorter & Marshall, 1997) and the Asylum for the Insane at Bloomingdale in New York City (Earle, 1848). By 1890, there had been an exponential increase in the number of American mental health hospitals and patients. According to Edmondson, by 1890, there was at least one mental hospital in each state, with American mental hospitals collectively housing half a million people, or 0.8% of the entire American population of the time (Edmondson, 2012).

The American attitude to involuntary commitment appears to have followed the pattern identified by Foucault (1988) for England and France, in which mental illness underwent a transformation from an incurable, divine affliction that was not seriously regulated to a disease state that was monitored and punished (Dain, 1976). The transformation of America into a country eager to commit its mentally ill population appears to reflect American urbanization and the intensifying regulation of American life (Schwab, 2013). In the 19th century, mental illness appeared to become a threat to the emerging American credo of efficiency, regulation, and scientific management of public and private affairs. This core element of American attitudes and practices related to

involuntary commitment has remained stable; what has changed, however, is the role played by asylums in enabling involuntary commitment.

The Era of Deinstitutionalization

The time from 1880 to the 1960s constitutes perhaps the most fascinating era of American health, as the country underwent a great many changes in mental health policy, orientation, and philosophy during this time. As mentioned earlier, roughly half a million Americans were in mental hospitals in 1880, with the majority of this number having been involuntarily committed (Edmondson, 2012). Sadly, many American asylums had ceased to be, or never were, productive places of treatment and were little more than places of imprisonment and punishment for not only the mentally ill but also for people—especially women—deemed to be embarrassments by their families (O'Brien, 2004). One such instance was that of Rosemary Kennedy, sister to future President John F. Kennedy, whose flirtatious behavior embarrassed her family and who was lobotomized at the behest of her father, Joseph Kennedy (O'Brien, 2004). Rosemary's brother, John, was the first American President to have a coherent and human mental health policy, one that set the stage for deinstitutionalization—the wave of closures of American mental hospitals (Dear & Wolch, 2014; Mechanic & Rochefort, 1990; Raphael & Stoll, 2013; Shadish et al., 1989; Whitmer, 1980).

Between 1963 and 1967, 145,000 Americans had left their mental health centers for community mental health centers, and this fact was a centerpiece of President Lyndon Johnson's praise of the community mental health center paradigm (L. Johnson, 1967, p. 285). In his statement appended to the Mental Health Amendments Act of 1967, President Johnson stated that "In 1963, we invested in a totally new idea: the conviction

that community centers could bring treatment of the mentally ill out of the darkness; out of isolation--into places where the people live" (L. Johnson, 1967, p. 285).

Deinstitutionalization, which also reflected the end of widespread involuntary commitment, began roughly a decade after pharmacological advantages that signaled the possible obsolescence of the asylum. In the 1950s, the main challenge to the asylum paradigm emerged from the invention of antipsychotic drugs (Moncrieff, 2013; Sharfstein et al., 2016; Shen, 1999; Stroup et al., 2003). These drugs had a calming effect on many mentally ill people (Moncrieff, 2013; Sharfstein et al., 2016; Shen, 1999; Stroup et al., 2003), an effect that was similar to effects previously obtained through lobotomies and other procedures (Feldman & Goodrich, 2001; Greenblatt, 1959; J. Johnson, 2009; Kucharski, 1984; LaFond & Dunham, 1992; Levine et al., 1995; Rothman, 1971), albeit without the disadvantages of such procedures. A brief timeline of such drugs is as follows:

- 1951: Isoniazid and iproniazid were tested as anti-tuberculosis drugs and found to improve mood; thorazine was found to assist in the symptom reduction of schizophrenic patients.
- 1952: The term *antidepressant* was coined to explain the effects of isoniazid in particular.
- 1953: Reserpine was discovered.
- 1955: Reserpine was introduced as an anti-depressant.
- 1956: Imipramine was introduced as an anti-depressant.
- 1958: Haloperidol was introduced in order to treat schizophrenia and many other kinds of psychoses.

- 1959: Chlorprothixene was introduced in order to treat schizophrenia and mania; Fluphenazine was introduced in order to treat schizophrenia and many other kinds of psychoses.

Thus, new antipsychotic drugs contributed to the momentum for deinstitutionalization. However, other factors were responsible as well. By the 1950s and 1960s, social mores vis-à-vis mental illness were changing (Grob, 2005). Mental illness, while still stigmatized, was increasingly included in the rhetoric and political logic of civil rights (Schwab, 2013). Thus, numerous factors contributed to deinstitutionalization.

It is important to note that deinstitutionalization did not mean the end of involuntary commitment. However, deinstitutionalization removed the infrastructure for widespread involuntary commitment. Before the Mental Health Amendments Act, there were hundreds of thousands of berths in dedicated mental hospitals that could be used to house involuntary committed individuals. Deinstitutionalization meant the end of this capacity, but not of the concept of involuntary commitment. Rather, after deinstitutionalization, involuntary commitment became more difficult to achieve, not only because of the changes in mental hospital infrastructure but also because of a growing awareness of the rights of mentally ill people (Appelbaum, 1996; Brown, 1981; Salize & Dressing, 2005). However, another perspective is that deinstitutionalization merely meant the transfer of the involuntarily committed mentally ill from hospitals to prisons (Beck & Maruschak, 2001; Diamond, Wang, Holzer III, & Thomas, 2001; Lamb & Weinberger, 2014; Whitmer, 1980). In either case, deinstitutionalization meant important changes in how and why involuntary commitment could be enacted in the United States

The Modern Era of Involuntary Commitment in New York

In New York, involuntary commitment is a multi-step process (Phelan, Sinkewicz, Castille, Huz, & Link, 2010). Involuntary commitment often takes the form of an escalation from emergency admission. Emergency admission takes place on the basis of a likelihood of serious harm to self or others. There are strict deadlines after admission on an emergency basis to determine the next stage of confinement. In a standard emergency admission scenario, a medical doctor on staff must certify, within 6 hours, that the admitted individual meets the emergency standard. A staff psychiatrist must confirm this certification within 48 hours of the individual's admission.

Once emergency status is certified by the medical doctor and psychiatrist on staff, New York stipulates that the patient can be held involuntarily for a maximum of 15 days after admission. However, further actions can be taken to convert the 15-day involuntary status pertaining to emergency admission to a 60-day involuntary status, which can be extended even further, pursuant to a court order of retention. There is no theoretical maximum number of days for which an individual can be held in involuntary status, but, in practice, involuntary commitment periods beyond 60 days are rare.

Involuntary commitment is a status conferred on an individual before his or her entry into the actual criminal justice system (Phelan et al., 2010). In New York, individuals who are placed in involuntary commitment might or might not enter the criminal justice system. After involuntary commitment, individuals might be released, switched to voluntary status, or arraigned and enter the judicial system. Involuntary commitment in New York takes place primarily in local hospitals equipped with dedicated beds and resources for psychiatric patients. However, involuntary commitment

can also be carried out at so-called forensic facilities.

According to the New York State Office of Mental Health, Division of Forensic Services (NYSOMH, 2017), forensic facilities are eligible to house the felony defendants who are incompetent to stand trial, defendants who are not responsible for criminal conduct, pre-trial detainees who require care as inpatients, inmates who require care as inpatients, transferred civil patients, and certain classes of sex offenders. These individuals can, depending on their admission type, be housed in the following facilities: Central New York Psychiatric Center (189 beds), Kirby Forensic Psychiatric Center (193 beds), Mid-Hudson Forensic Psychiatric Center (274 beds), Northeast Regional Forensic Unit (17 beds), Rochester Regional Forensic Unit (84 beds), Central New York Psychiatric Center Secure Treatment Facility (280 beds), and St. Lawrence Psychiatric Center Secure Treatment Facility (92 beds) (NYSOMH, 2017).

2.5 Gaps in the Literature

From a policy perspective, the main gap in the institutional literature is one of justification. The literature on involuntarily commitment is notable for the very clear divide that exists between those for whom the main policy interest is protection of life and those for whom the main policy interest is protection of the liberty of the mentally ill. Such considerations are of vital importance for policy-makers in terms of finding either support or disconfirmation for the validity of involuntary commitment. However, the literature on involuntary commitment is almost exclusively qualitative in nature, leaving policy-makers with little empirical rationale for promoting or attempting to dismantle involuntary commitment laws. This gap in the literature has been addressed through the CBA described and justified in the next section of the article.

Methodology and Underlying Assumptions

Before presenting the numerical assumptions of the study, it would be useful to discuss the conceptual dimensions of costs and benefits associated with involuntary commitment. Consider the cost that the state pays a cost for involuntary incarceration; the return on this investment lies at the heart of a CBA for involuntary incarceration. The stated legislative reason for involuntary commitment is to prevent people from losing their lives to mentally ill people who are not involuntarily committed (Hopper, 2013; Link & Hatzenbuehler, 2016; Player, 2015; Saks, 2016; Sharfstein et al., 2016). Meanwhile, the main argument advanced against involuntary commitment is wrongful loss of liberty to the involuntarily committed individual (Cavaiola & Dolan, 2016; Durham & La Fond, 2015; Gourevitch et al., 2013; Player, 2015).

In carrying out a CBA, it is first important to calculate (a) the actual cost of involuntary commitment; (b) the value of lives lost to people who are not, but who ought to be, involuntarily committed; and (c) the cost of lost liberty to the involuntarily committed individual. Next, for methodological rigor, it is important to be able to differentiate between outcomes that are uniquely attributable to involuntary commitment and outcomes that can be encompassed by assisted outpatient programs such as those promoted by Kendra's Law. Fortunately, there is existing statistical work that can be drawn upon in this regard.

For example, a recent statistical meta-analysis (Kisely, Campbell, & Preston, 2005) tracked the outcomes of court-ordered outpatient commitment with voluntary community treatment. Although outpatient commitment is not identical to involuntary commitment, it involves a degree of coercion and is, in this sense, comparable to

involuntary commitment. Kisely et al. found that 238 outpatient commitments were necessary to prevent an arrest of a mentally ill person. In the 1990s, the Duke Study tracked the outcomes of mentally ill people who were judicially compelled to engage in an outpatient commitment versus mentally ill people who were merely offered mental health services (Swartz et al., 1999). The Duke Study discovered that arrests were reduced by 74% among individuals who were court-ordered to engage in outpatient commitments (Swartz et al., 1999). In addition, violent behavior among the court-ordered cohort was reduced by 50% versus those who had voluntary access to outpatient mental health services (Swartz et al., 1999).

Currently, most of the empirical work on the effects of involuntary treatment is based on court-ordered assisted outpatient programs, not on involuntary commitment *per se*. As discussed earlier in the context of New York law—which is similar to the laws of many other states in this respect—involuntary commitment is a more coercive and acute approach than assisted outpatient programs. Nonetheless, data arising from assisted outpatient services can be applied to involuntary commitment with some slight changes, as discussed subsequently in this section of the article.

In conducting a CBA of involuntary commitment, the most plausible alternative is the absence of such commitment. If a mentally ill person commits a crime of sufficient seriousness, then he or she is likely to bypass involuntary commitment altogether and be remanded directly to the criminal justice system. In this sense, the system of involuntary commitment is designed to hold individuals who might pose a danger to others—or to themselves—if not committed, but who are not yet criminals. Understood in this way, a CBA of involuntary commitment should be able to weigh the costs and benefits of

involuntary commitment versus release.

A number of numerical assumptions can now be specified.

First, the economic cost of involuntary incarceration has been estimated at between $1,200 and $1,800 a day (Texas, 2008).

Second, on the conservative assumption that individuals in involuntary commitment are a quarter more dangerous to others than individuals in court-mandated outpatient programs, and on the basis of Kisely et al.'s (2005) findings, it can be assumed that 178 involuntary commitments are needed to prevent one arrest. The 125% adjustment appears to reflect a consensus in the previous literature (Angermeyer & Matschinger, 1996; Raphael & Stoll, 2013; Roy et al., 2016; Teplin, 1983; Teplin, Abram, & McClelland, 1994).

Third, the nature of the arrests prevented by involuntary commitment needs to be specified. There are no reliable data for crime committed by people either diagnosed with, or suspected of, mental illness. However, on the basis of previous findings (Angermeyer & Matschinger, 1996; Raphael & Stoll, 2013; Roy et al., 2016; Teplin, 1983; Teplin et al., 1994), it can be inferred that someone who is involuntarily committed is far more likely to be arrested for a violent crime than for a property crime or other offense. Based on data from the Federal Bureau of Investigation (FBI, 2012), there were 12,196,959 arrests in the U.S. in 2012, and 521,196 of these arrests were for violent crimes. Over 4 million arrests were based on drug abuse, driving under the influence, and larceny-theft. A conservative assumption is that 1 of 2 arrests prevented by involuntary commitment is likely to be a violent arrest. Thus, the modified number to treat can be doubled from 178 to 356; in other words, for every involuntary commitment, 1 violent

crime arrest is prevented.

Fourth, the average stay in involuntary commitment appears to be two days (Hedman et al., 2016).

Fifth, according to the Federal Bureau of Investigation (2012), violent crime can consist of the following, among other categories of crime:

- Murder and negligent manslaughter (2.15% of violent crimes)
- Rape (3.47% of violent crimes)
- Robbery (19.89% of violent crimes)
- Aggravated assault (74.51% of violent crimes)

An empirical study by DeLisi and colleagues (DeLisi et al., 2010) estimated the following economic costs for various criminal acts:

- Murder: $17.25 million
- Rape: $448,532
- Armed robbery: $335,733
- Aggravated assault: $145,379

The Delisi et al. data and the Federal Bureau of Investigation data, along with some of the other data sources mentioned in this section of the article, were drawn upon in order to generate the findings presented below.

Findings

DeLisi et al.'s (2010) data, in conjunction with the Federal Bureau of Investigation's (2012) data, can be utilized to calculate the benefits of a single arrest, using weighting, as follows:

(0.0215)(17,250,000) + (0.0347)(448,532) + (0.1989)(335,733) + (0.7451)(145379) =

$561,538.20

This approach weights the costs of the existing mix of violent crimes in a manner that generates an average violent crime's cost. Thus, every 356 involuntary commitments save $561,538.20 in criminal costs. However, on the assumptions that every commitment costs a mean of $1,500 per day, and that an average involuntary commitment is likely to be 2 days in length, 356 involuntary commitments generate 356*1,500*2 = $1,068,000 in costs.

Thus, the costs of involuntary commitment are substantially greater than the benefits, bearing in mind that the only benefit is defined as crime prevention—the stated policy reason for involuntary commitment (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P. Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000).

Of course, it should be noted that there is a conceptual difference between the costs and the benefits in this scenario. The costs of crime are pure costs; they represent a loss that is not made up somewhere else. On the other hand, the costs of involuntary commitment are not pure costs, but are rather more akin to a transfer of funds. An involuntarily committed patient who is on Medicaid will not pay $3,000 for a two-day stay; rather, the hospital will bill government for this $3,000, which is thus transferred from taxpayers to the hospital. The $3,000 received by the hospital will have something of a Keynesian effect (Dalziel, 1996; De Angelis, 2000; Howitt, 2006; Ono, 2011), as this $3,000 will be directed elsewhere in the economy. For example, hospitals will use such payments to purchase machines and pay personnel. On the other hand, the economic costs of murder have no such effect, because they represent a complete loss of productive

capacity rather than the transfer of costs in a manner that can stimulate overall economic growth

Conceptually, therefore, there are some difficulties in any direct comparison of the costs imposed by (a) crimes committed by the segment of the mentally ill population that is subject to involuntary commitment and (b) involuntary commitment stays within hospitals. In the presence of Keynesian effects (Arestis, 1996; Cogan, Cwik, Taylor, & Wieland, 2010; Dalziel, 1996; De Angelis, 2000; Dow, 1990; Howitt, 2006; Naveed Iqbal, Muhammad Sohail, & Shamim, 2011; Ono, 2011), it could be argued that insurance- or private patient-subsidized hospital spending is always beneficial. Thus, the costs of involuntary commitment might be expanded to include factors other than the amount that hospitals bill insurance companies or patients.

One interesting approach is to utilize value-of-life estimates, such as the $7.4 million figure suggested by the Environmental Protection Agency (EPA, 2017). If a life is worth $7.4 million, and on the assumption that the average American will live roughly 79 years (or around 28,835 days), then the cost of a day of lost liberty can be calculated as 7,400,000 / 28,835 = $256.63. If so, then the cost of a 2-day involuntary commitment to the individual could be estimated as $513.26. Multiplied by 356, this figure becomes $182,720.56. Thus, in order to prevent an act of violence costing $561,538.20, the state would have to deprive individual subjects of involuntarily commitment of $182,720.56 in life costs.

The main argument leveled against involuntary commitment is a personal liberty argument (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P.

Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000), not an economic costs argument. For this reason, quantifying the value of lost liberty is likely to be a better metric of the cost of involuntary commitment. Similarly, because the main argument on behalf of involuntary commitment is now safety (Hopper, 2013; Link & Hatzenbuehler, 2016; Player, 2015; Saks, 2016; Sharfstein et al., 2016), it is appropriate to treat the main benefit of involuntary commitment in terms of recovered crime costs. If these standards of comparison are used, then involuntary commitment's benefits substantially outweigh its costs. If the economic costs of involuntary commitment are considered, Keynesian effects are likely to complicate the analysis, preventing a firm conclusion from being drawn.

Even though personal liberty constitutes the main basis for critiques of involuntary commitment, justifying the use of mortality risk valuation as a cost metric, more than the intrinsic value of a life (or of liberty) is at stake in this calculation. The EPA's (2017) calculation reflects the value that people place upon their lives as inferred from economic decisions. The EPA's calculation does not reflect the actual economic value of an involuntarily committed individual to society. Thus, the costs of involuntary commitment can be expanded to include productivity costs to the economy.

According to the United States Bureau of Labor Statistics (BLS, 2017), the average American engaged in private industry makes roughly $200 per weekday. If the average stay in involuntary commitment is 2 days (Hedman et al., 2016), there is no guarantee that these days will not fall on a weekend or other holiday. Using a mathematical approach, the wage figure can be adjusted to reflect the likelihood of weekend overlap with involuntary commitment, with the figure of $400 for 2 days

multiplied by 5/7 to yield $285.72 in lost wages. Multiplied by 356, this figure becomes $101,736.20. Thus, in order to prevent an act of violence costing $561,538.20, the state would have to deprive the economy of $101,736.20 in productivity. This amount can be added to the intrinsic life value cost, $182,720.56, to yield $284,436.88 in total costs of involuntary commitment. This amount is still substantially less than the $561,538.20 in costs generated by an act of violence perpetrated by someone who would otherwise be in a state of involuntary commitment.

Limitations of the Findings

All CBAs are only as strong as their assumptions and inputs. In the case of involuntary commitment, there are numerous possible assumptions. The CBA presented above assumed that (a) mortality risk valuation is an appropriate way of quantifying the cost of involuntary commitment, (b) loss of productivity ought to be factored in to the cost of involuntary commitment, and (c) the costs of specific crimes can be both estimated and pooled to reflect the benefit of a single prevented arrest for violent crime. These assumptions were explored at length in the earlier sections of the paper and, where possible, justified through various means. However, there is likely to be some degree of arbitrariness and bias in these assumptions, regardless of their justifications. Examined more closely, every assumption is subject to weaknesses. For example, it might be a false assumption that an involuntary commitment of *x* days deprives the economy of *x* days' worth of productivity. Involuntary commitment might result in more serious economic damage driven by the involuntarily committed individual's inability to work for much longer (as a result of trauma or some other factor) or by the loss of a job attending disclosure of involuntary commitment status.

For this reason, the CBA presented in this article ought to be taken as a starting-point for further analysis rather than an unequivocal conclusion. The complexity of involuntary commitment is unlikely to be resolved by the application of philosophical or other qualitative arguments of the kind that already predominate in the literature (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P. Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000). Some kind of empirical analysis is necessary. Admittedly, such analysis is limited by assumptions and inputs, but it represents firmer ground for policy-oriented decision-making, and the transparent nature of both assumptions and inputs allow for both proponents and opponents of involuntary commitment to refine their arguments and seek common ground. Therefore, while limited, a CBA approach seems to represent a fruitful approach to resolving the otherwise intractable philosophical problems raised by involuntary commitment.

Reflections on Policy

Involuntary commitment is a complex and contentious topic. Involuntary commitment raises a fundamental policy question: How should the state balance the need to (a) protect its citizens from each other and from themselves and (b) ensure that personal liberties are not unjustifiably curtailed? This tension exists not only in the domain of involuntary commitment but in all matters of criminal justice policy. Therefore, much rides on attempts to determine the validity, extent, and applicability of involuntarily commitment.

As noted, Kendra's Law was named after a young woman, Kendra Webdale, who was pushed into the path of an oncoming subway train by a schizophrenic man named

Andrew Goldstein. This act horrified New Yorkers, millions of whom take the subway every day, and cemented the fear—growing since deinstitutionalization and other factors dumped large numbers of mentally ill people into New York City's streets in the 1980s—that mentally ill people were a public menace. The public clamor for policy solutions led to Kendra's Law and other means, both direct and indirect, of ensuring the involuntary commitment of individuals deemed both mentally ill and dangerous by competent psychiatric authorities. However, lawmakers, scholars, doctors, and ordinary citizens remained mindful of the notorious excesses of the asylum era (Feldman & Goodrich, 2001; Greenblatt, 1959; J. Johnson, 2009; Kucharski, 1984; LaFond & Dunham, 1992; Levine et al., 1995; Rothman, 1971). Thus, even as policy focused on protection from the mentally ill, protection of the civil liberties of the mental ill retained an important place in policy thinking.

In order to resolve the tension that undoubtedly exists between the policy goal of protection from the mentally ill and the policy goal of protection of the mentally ill, numerous moral, ethical, and philosophical arguments have been put forward (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P. Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000). To date, these arguments have not helped to resolve the outstanding issues of (a) whether involuntary commitment ought to be retained and (b) what the precise empirical justification or justifications for retaining involuntary commitment are. The kind of CBA demonstrated in this article is an alternative means of exploring the utility of involuntary commitment. Based on the CBA results, it appears appropriate to suggest that policy-makers continue to promote

involuntary commitment.

The study drew on empirical assumptions that can be applied to any setting in the United States, but the literature review contained a special discussion of New York. It would therefore be appropriate to make recommendations concerning New York's policies in particular. One such approach could involve the use of the CBA findings to identify an optimal length of time for involuntary commitment in New York. Currently, there is a 15-day maximum cutoff for involuntary commitment on the basis of emergency admission and no theoretical upper limit for involuntary commitment after conversion from emergency admission to true involuntary status (although a judicial hearing is required after 60 days of involuntary commitment).

Based on the CBA conducted and reported upon in this article, there is no reason for New York to change these time limits on the basis of efficiency concerns. No matter how long the length of involuntary commitment, involuntary commitment more than pays for itself due to the reduction in violent crime. Because both the costs and benefits are linearly fixed, and because the benefits outweigh the costs, there is no day after which involuntary commitment becomes more cost-disadvantageous. Accordingly, psychiatrists and other mental health professionals, rather than cost-concerned policy makers, should continue to determine the appropriate lengths of involuntary commitment in New York as well as other states.

Conclusion

One of the main findings of the study was that the cost of such violent crime, weighted to reflect the costs of different kinds of violent crimes, is $561,538.20. The other main findings were that (a) using a statistical value of life index, the cost of 2 days

of involuntary commitment distributed across 356 individuals is $182,720.56; and (b) the economic cost is $101,736.20 in lost productivity. Therefore, the total costs of involuntary commitment are $284,436.88, while the total benefits, measured in avoided crime, of involuntary commitment are $561,538.20. Thus, the benefits of involuntary commitment outweigh the costs, providing a reason to retain involuntary commitment in New York and other states. In the remainder of the conclusion, the findings of the study will be utilized as a basis from which to make recommendations for future study and practice alike.

Recommendations for Future Study

There are a number of recommendations that can be made for the future study of involuntary commitment using CBA or related empirical means. First, more data should be gathered on the number of days of an average involuntary commitment. The existing data on this metric are extremely sparse. Moreover, as far as New York is concerned, existing public agencies do not offer comprehensive data on any aspect of involuntary commitment. Policy-makers could be instrumental in requiring agencies and other government departments to gather and disseminate more data on not only the number of days of an average involuntary commitment but also other variables related to involuntary commitment.

Second, time-series approaches such as Cox regression need to be taken to the issue of involuntary commitment and crime. It is not yet clear whether involuntary commitment could have a categorical or a continuous crime-dampening effect, and this gap in knowledge has important implications for length-of-stay policy. For example, if the very act of involuntary commitment has a crime-suppressive effect, then the length of

stay is not a meaningful factor. On the other hand, it could also be the case that, the longer the length of an involuntary commitment, the less likely an individual subjected to such a commitment is to commit a crime upon release from involuntary commitment. Currently, very little appears to be known about time-to-event dynamics in the release or retention of individuals who are in involuntary commitment.

Third, the assumptions of CBA need to be added to and sharpened. The CBA assumptions and inputs utilized in this article were fairly general. It is possible that more complex models could be developed based on observation of individuals in involuntary commitment. Such attempts could, at the least, allow greater dialogue between proponents and opponents of involuntary commitment over the applicable costs and benefits associated with this legal status.

Fourth, the stochastic approach utilized in this CBA is based on the ascription of violent crime likelihood to individuals who are placed in a state of involuntary commitment. This approach, though guided by existing literature and observations, is imperfect. It would be more appropriate for state mental health agencies and other relevant bodies to collect data on crime and involuntary commitment status. Such data would be particularly useful in attempting to draw causal links between crime and involuntary commitment status. Indeed, these data would allow some quasi-experimental conclusions to be drawn on the basis of actual patterns in New York and other states.

The main theme in the recommendations for research is the need for more and better data. Although involuntary commitment is an issue of enormous contentiousness and public interest (Douzenis & Michopoulos, 2015; Goldman, 2015; Luckey & Berman, 1981; Morse, 1982; Mulvey et al., 1987; Phelan & Link, 1998; Silver et al., 2015; W. P.

Sullivan et al., 2014; Swanson et al., 2003; Watson et al., 2000), neither researchers nor health authorities have assembled the kinds of rich, comprehensive datasets that are needed to better understand the viability and ramifications of involuntary commitment. In an era of empirically guided decision-making, data are indispensable, and it is the responsibility of government in particular to increase the funding for data collection and dissemination efforts.

Recommendations for Future Practice

There are two recommendations for further practice that can be made on the basis of the findings discussed earlier. First, in New York—and possibly other states—involuntary commitment should continue to be utilized. Involuntary commitment is a legislative and policy reality; to overturn it would require, at the least, some form of empirical evidence that involuntary commitment is more costly than beneficial. The opposite evidence emerged from the CBA presented earlier. Therefore, there is no pressing reason to try to change policies related to involuntary commitment.

Second, as also emphasized in the recommendations for scholarship, various stakeholders ought to be mindful of the need to collect better data related to involuntary commitment. There are few publicly available statistics related to involuntary commitment, which creates an additional challenge for both researchers and policy-makers interested in assessing the usefulness and viability of involuntary commitment. Policy-makers should give thought to mandating better and more comprehensive data collection related not merely to involuntary commitment but also to mental health in general. The availability of such data is likely to inform improved policy decisions and research.

General Policy Limitations of the CBA Approach

A CBA is merely one means of guiding future practice—a means that is based on the explicit assumption that some kind of quantifiable logic should guide policy. However, a CBA is not the only means of guiding practice. It is certainly possible that the issue of involuntary commitment cannot be, or perhaps should not be, resolved by a CBA at all, in which case future practice should be guided by considerations of government as a reformist, loss-absorbing force rather than as a rational economic factor. It could conceivably be argued that, in the absence of an actual experiment, all CBAs related to involuntary commitment are, at best, thought experiments and counterfactuals. If so, then policy related to involuntary commitment might be approached in an entirely different manner—for example, from the framework of first principles as opposed to a framework of quantifiable comparisons. However, should policy related to involuntary commitment take an empirical term, then such policy could indeed be guided by the kinds of analysis presented in this article.

References

Angermeyer, M. C., & Matschinger, H. (1996). The effect of violent attacks by schizophrenic persons on the attitude of the public towards the mentally ill. *Social Science & Medicine, 43*(12), 1721-1728.

Appelbaum, P. S. (1996). Almost a revolution: an international perspective on the law of involuntary commitment. *The journal of the American Academy of Psychiatry and the Law, 25*(2), 135-147.

Arestis, P. (1996). Post-Keynesian economics: towards coherence. *Cambridge Journal of Economics, 20*(1), 111-135.

Aviram, U. (1990). Community care of the seriously mentally ill: Continuing problems and current issues. *Community Mental Health Journal, 26*(1), 69-88.

Baker-Ericzén, M. J., Jenkins, M. M., & Haine-Schlagel, R. (2013). Therapist, parent, and youth perspectives of treatment barriers to family-focused community outpatient mental health services. *Journal of Child and Family Studies, 22*(6), 854-868.

Bassuk, E. L., Richard, M. K., & Tsertsvadze, A. (2015). The prevalence of mental illness in homeless children: A systematic review and meta-analysis. *Journal of the American Academy of Child & Adolescent Psychiatry, 54*(2), 86-96. e82.

Beck, A. J., & Maruschak, L. M. (2001). Mental health treatment in state prisons. Retrieved from http://www.bjs.gov/index.cfm?ty=pbdetail&iid=788

Binder, M. D. (2009). Broca's aphasia. In N. Hirokawa (Ed.), *Encyclopedia of neuroscience* (pp. 498). New York, NY: Springer.

BLS. (2017). Average hourly and weekly earnings. Retrieved from https://www.bls.gov/news.release/empsit.t19.htm

Brown, P. (1981). The mental patients' rights movement and mental health institutional change. *International Journal of Health Services, 11*(4), 523-540.

Cavaiola, A. A., & Dolan, D. (2016). Considerations in civil commitment of individuals with substance use disorders. *Substance Abuse, 37*(1), 181-187.

Cogan, J. F., Cwik, T., Taylor, J. B., & Wieland, V. (2010). New Keynesian versus old Keynesian government spending multipliers. *Journal of Economic Dynamics & Control, 34*(3), 281-295.

Cutler, D. L., Bevilacqua, J., & McFarland, B. H. (2003). Four decades of community mental health: A symphony in four movements. *Community Mental Health Journal, 39*(5), 381-398.

Dain, N. (1976). From colonial America to bicentennial America: two centuries of vicissitudes in the institutional care of mental patients. *Bulletin of the New York Academy of Medicine, 52*(10), 1179-1196.

Dalziel, P. (1996). The Keynesian multiplier, liquidity preference, and endogenous money. *Journal of Post Keynesian Economics*, 311-331.

De Angelis, M. (2000). Social relations and the Keynesian multiplier. *Review of Radical Political Economics, 32*(1), 80-103.

de Haan, A. M., Boon, A. E., de Jong, J. T., Hoeve, M., & Vermeiren, R. R. (2013). A meta-analytic review on treatment dropout in child and adolescent outpatient mental health care. *Clinical Psychology Review, 33*(5), 698-711.

Dear, M. J., & Wolch, J. R. (2014). *Landscapes of despair: From deinstitutionalization to homelessness*. Princeton, N.J.: Princeton University Press.

DeLisi, M., Kosloski, A., Sween, M., Hachmeister, E., Moore, M., & Drury, A. (2010). Murder by numbers: Monetary costs imposed by a sample of homicide offenders. *The Journal of Forensic Psychiatry & Psychology, 21*(4), 501-513.

Diamond, P. M., Wang, E. W., Holzer III, C. E., & Thomas, C. (2001). The prevalence of mental illness in prison. *Administration and Policy in Mental Health and Mental Health Services Research, 29*(1), 21-40.

Douzenis, A., & Michopoulos, I. (2015). Involuntary admission: The case of anorexia nervosa. *International Journal of Law and Psychiatry, 39*, 31-35.

Dow, S. C. (1990). Post-Keynesianism as political economy: a methodological discussion. *Review of Political Economy, 2*(3), 345-358.

Drake, R. E., Green, A. I., Mueser, K. T., & Goldman, H. H. (2003). The history of community mental health treatment and rehabilitation for persons with severe mental illness. *Community Mental Health Journal, 39*(5), 427-440.

Durham, M. L., & La Fond, J. Q. (2015). The Empirical Consequences and Policy Implications of Broadening the Statutory Criteria for Civil Commitmentt. *Yale Law & Policy Review, 3*(2), 395-446.

Earle, P. (1848). *History, description and statistics of the Bloomingdale Asylum for the Insane*. New York, NY: Egbert, Hovey & King, Printers.

Edmondson, B. (2012). Crazy enough to care. *The American Scholar, 81*(2), 46-55.

EPA. (2017). Mortality risk valuation. Retrieved from https://www.epa.gov/environmental-economics/mortality-risk-valuation

FBI. (2012). Crime in the U.S., 2012. Retrieved from https://ucr.fbi.gov/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/29tabledatadecpdf

Feldman, R. P., & Goodrich, J. T. (2001). Psychosurgery: a historical overview. *Neurosurgery, 48*(3), 647-659.

Foucault, M. (1988). *Madness and civilization: A history of insanity in the age of reason*. New York, NY: Vintage.

Gavarró, A., & Salmons, I. (2013). The discrimination of intonational contours in Broca's aphasia. *Clinical Linguistics & Phonetics, 27*(8), 632-646.

Gelberg, L., Linn, L. S., & Leake, B. D. (1988). Mental health, alcohol and drug use, and criminal history among homeless adults. *American Journal of Psychiatry, 145*(2), 191-196.

Goldman, A. (2015). Continued overreliance on involuntary commitment: The need for a less restrictive alternative. *Journal of Legal Medicine, 36*(2), 233-251.

Gourevitch, R., Brichant-Petitjean, C., Crocq, M.-A., & Petitjean, F. (2013). Law & psychiatry: The evolution of laws regulating psychiatric commitment in France. *Psychiatric Services, 64*(7), 609-612.

Greenblatt, M. (1959). Relation between history, personality and family pattern and behavioral response after frontal lobe surgery. *American Journal of Psychiatry, 116*(3), 193-202.

Grob, G. N. (2005). Public policy and mental illnesses: Jimmy Carter's presidential commission on mental health. *Milbank Quarterly, 83*(3), 425-456.

Hedman, L. C., Petrila, J., Fisher, W. H., Swanson, J. W., Dingman, D. A., & Burris, S. (2016). State laws on emergency holds for mental health stabilization. *Psychiatric Services, 67*(5), 529-535.

Hopper, K. (2013). The murky middle ground–When ethnographers engage public health. *Social Science & Medicine, 99*, 201-204.

Howitt, P. (2006). The microfoundations of the Keynesian multiplier process. *Journal of Economic Interaction and Coordination, 1*(1), 33-44.

Humphreys, K., & Rappaport, J. (1993a). From the community mental health movement to the war on drugs: A study in the definition of social problems. *American Psychologist, 48*(8), 892-901.

Humphreys, K., & Rappaport, J. (1993b). From the community mental health movement to the war on drugs: A study in the definition of social problems. *American Psychologist, 48*(8), 892.

Johnson, J. (2009). A dark history: memories of lobotomy in the new era of psychosurgery. *Medicine Studies, 1*(4), 367-378.

Johnson, L. (1967). *Public Papers of the Presidents ofthe United States*. New York, NY: Best Books.

Jones, M. M. (2015). Creating a Science of Homelessness During the Reagan Era. *Milbank Quarterly, 93*(1), 139-178.

Kisely, S. R., Campbell, L. A., & Preston, N. J. (2005). Compulsory community and involuntary outpatient treatment for people with severe mental disorders. *Cochrane Database of Systematic Reviews*(12), 1-62.

Koriat, A., Goldsmith, M., & Pansky, A. (2000). Toward a psychology of memory accuracy. *Annual Review of Psychology, 51*(1), 481-537.

Kucharski, A. (1984). History of frontal lobotomy in the United States, 1935-1955. *Neurosurgery, 14*(6), 765-772.

LaFond, J. Q., & Dunham, M. (1992). *Back to the asylum*. New York, NY: Oxford University Press US.

Lamb, H. R., & Weinberger, L. E. (2014). Decarceration of U.S. jails and prisons: where will persons with serious mental illness go? *Journal of the American Academy of Psychiatry and the Law Online, 42*(4), 489-494.

Leong, F. T. (1994). Asian Americans' differential patterns of utilization of inpatient and outpatient public mental health services in Hawaii. *Journal of Community Psychology, 22*(2), 82-96.

Leslie, L. K., Hurlburt, M. S., Landsverk, J., Barth, R., & Slymen, D. J. (2004). Outpatient mental health services for children in foster care: A national perspective. *Child Abuse & Neglect, 28*(6), 697-712.

Levine, P., LaFond, J. Q., & Durham, M. L. (1995). Back to the asylum: The future of mental health law and policy in the United States. *Psychiatric Rehabilitation Journal, 19*(1), 94-95.

Levinson, D. (2004). *Encyclopedia of homelessness*. Thousand Oaks, CA: Sage.

Link, B., & Hatzenbuehler, M. L. (2016). Stigma as an unrecognized determinant of population health: research and policy implications. *Journal of Health Politics, Policy and Law, 41*(4), 653-673.

Luckey, J. W., & Berman, J. J. (1981). Effects of new commitment laws on the mental health system. *American Journal of Orthopsychiatry, 51*(3), 479-483.

Marcus, A. (2006). *Where have all the homeless gone?* New York, NY: Bergahn Books.

Mechanic, D., & Rochefort, D. A. (1990). Deinstitutionalization: An appraisal of reform. *Annual Review of Sociology*, 301-327.

Mertens, D. M. (2009). *Research and evaluation in education and psychology*. Thousand Oaks, CA: Sage.

Min, E. (1999). *Reading the homeless*. Westport, CT: Reading the Homeless.

Moncrieff, J. (2013). *The bitterest pills: The troubling story of antipsychotic drugs*. New York, NY: Palgrave Macmillan.

Morse, S. J. (1982). A preference for liberty: The case against involuntary commitment of the mentally disordered. *California Law Review, 70*(1), 54-106.

Mulvey, E. P., Geller, J. L., & Roth, L. H. (1987). The promise and peril of involuntary outpatient commitment. *American Psychologist, 42*(6), 571-584.

Naveed Iqbal, S., Muhammad Sohail, T., & Shamim, A. S. (2011). Measuring the impact of multiplier, to determine the Keynesian model of income, in open economy, in the context of Pakistan. *African Journal of Business Management, 5*(17), 7385-7391.

NYSOMH. (2017). Division of forensic services. Retrieved from https://www.omh.ny.gov/omhweb/forensic/BFS.htm

O'Flaherty, B. (1996). *Making room: The economics of homelessness*. Cambridge, MA: Harvard University Press.

O'Brien, G. (2004). Rosemary Kennedy: the importance of a historical footnote. *Journal of Family History, 29*(3), 225-236.

Okin, R. L. (1984). How community mental health centers are coping. *Psychiatric Services, 35*(11), 1118-1125.

Ono, Y. (2011). The Keynesian multiplier effect reconsidered. *Journal of Money, Credit and Banking, 43*(4), 787-794.

Ornstein, R. (1970). *The psychology of consciousness*. New York, NY: Viking-Penguin.

Padgett, D. K., Patrick, C., Burns, B. J., & Schlesinger, H. J. (1994). Ethnicity and the use of outpatient mental health services in a national insured population. *American Journal of Public Health, 84*(2), 222-226.

Peterson, J. K., Skeem, J., Kennealy, P., Bray, B., & Zvonkovic, A. (2014). How often and how consistently do symptoms directly precede criminal behavior among offenders with mental illness. *Law and Human Behavior, 38*(5), 439-449.

Phelan, J. C., & Link, B. (1998). The growing belief that people with mental illnesses are violent: the role of the dangerousness criterion for civil commitment. *Social Psychiatry and Psychiatric Epidemiology, 33*(1), S7-S12.

Phelan, J. C., Sinkewicz, M., Castille, D. M., Huz, S., & Link, B. G. (2010). Effectiveness and outcomes of assisted outpatient treatment in New York State. *Psychiatric Services, 61*(2), 137-143.

Player, C. T.-L. (2015). Outpatient commitment and procedural due process. *International Journal of Law and Psychiatry, 38*, 100-113.

Pottick, K. J., Warner, L. A., Vander Stoep, A., & Knight, N. M. (2014). Clinical characteristics and outpatient mental health service use of transition-age youth in the USA. *The Journal of Behavioral Health Services & Research, 41*(2), 230-243.

Raphael, S., & Stoll, M. A. (2013). Assessing the contribution of the deinstitutionalization of the mentally ill to growth in the US incarceration rate. *The Journal of Legal Studies, 42*(1), 187-222.

Rogers, R., Fiduccia, C. E., Drogin, E. Y., Steadham, J. A., Clark III, J. W., & Cramer, R. J. (2013). General knowledge and misknowledge of Miranda rights: Are effective Miranda advisements still necessary? *Psychology, Public Policy, and Law, 19*(4), 432-444.

Roos, L. E., Distasio, J., Bolton, S.-L., Katz, L. Y., Afifi, T. O., Isaak, C., . . . Sareen, J. (2014). A history in-care predicts unique characteristics in a homeless population with mental illness. *Child Abuse & Neglect, 38*(10), 1618-1627.

Rosenheck, R., Gallup, P., & Leda, C. A. (1991). Vietnam era and Vietnam combat veterans among the homeless. *American Journal of Public Health, 81*(5), 643-646.

Rothman, D. J. (1971). *The discovery of the asylum*. New York, NY: Transaction Publishers.

Roy, L., Crocker, A. G., Nicholls, T. L., Latimer, E., Gozdzik, A., O'Campo, P., & Rae, J. (2016). Profiles of criminal justice system involvement of mentally ill homeless adults. *International Journal of Law and Psychiatry, 45*, 75-88.

Rüsch, N., Müller, M., Lay, B., Corrigan, P. W., Zahn, R., Schönenberger, T., . . . Rössler, W. (2014). Emotional reactions to involuntary psychiatric hospitalization

and stigma-related stress among people with mental illness. *European Archives of Psychiatry and Clinical Neuroscience, 264*(1), 35-43.

Saks, E. (2016). Mental health law and the Americans with Disabilities Act: One consumer's journey. *Inclusion, 4*(1), 39-45.

Salize, H. J., & Dressing, H. (2005). Coercion, involuntary treatment and quality of mental health care: is there any link? *Current Opinion in Psychiatry, 18*(5), 576-584.

Scargill-Bird, S. (1908). *A guide to the various classes of documents preserved in the public record office*. London, U.K.: H.M. Stationery Office.

Schwab, J. (2013). *Sociocultural roots of mental illness: An epidemiologic survey*. New York, NY: Springer Science & Business Media.

Shadish, W. R., Lurigio, A. J., & Lewis, D. A. (1989). After deinstitutionalization: The present and future of mental health long-term care policy. *Journal of Social Issues, 45*(3), 1-15.

Sharfstein, S. S. (2014). Whatever happened to community mental health? *Psychiatric Services, 51*(5), 616-620.

Sharfstein, S. S., Lieberman, J. A., & Talbott, J. A. (2016). AOT and long-term use of antipsychotics. *Psychiatric Services, 67*(7), 811-811.

Shen, W. W. (1999). A history of antipsychotic drug development. *Comprehensive Psychiatry, 40*(6), 407-414.

Shorter, E., & Marshall, J. C. (1997). A history of psychiatry. *Nature, 386*(6623), 346-346.

Silver, J., Fisher, W. H., & Silver, E. (2015). Preventing persons affected by serious mental illnesses from obtaining firearms: the evolution of law, policy, and practice in Massachusetts. *Behavioral Sciences & the Law, 33*(2-3), 279-289.

Stroup, T. S., McEvoy, J. P., Swartz, M. S., Byerly, M. J., Glick, I. D., Canive, J. M., . . . Lieberman, J. A. (2003). The national institute of mental health clinical antipsychotic trials of intervention effectiveness (CATIE) project: schizophrenia trial design and protocol development. *Schizophrenia Bulletin, 29*(1), 15-31.

Stuart, H. L., & Arboleda-Flórez, J. E. (2014). A public health perspective on violent offenses among persons with mental illness. *Psychiatric Services, 52*(5), 654-659.

Sullivan, W. P., Carpenter, J., & Floyd, D. F. (2014). Walking a tightrope: case management services and outpatient commitment. *Journal of Social Work in Disability & Rehabilitation, 13*(4), 350-363.

Swanson, J. W., Easter, M. M., Robertson, A. G., Swartz, M. S., Alanis-Hirsch, K., Moseley, D., . . . Petrila, J. (2016). Gun violence, mental illness, and laws that prohibit gun possession: evidence from two Florida counties. *Health Affairs, 35*(6), 1067-1075.

Swanson, J. W., Swartz, M. S., Elbogen, E. B., Wagner, H. R., & Burns, B. J. (2003). Effects of involuntary outpatient commitment on subjective quality of life in persons with severe mental illness. *Behavioral Sciences & the Law, 21*(4), 473-491.

Swartz, M. S., Swanson, J. W., Wagner, H. R., Burns, B. J., Hiday, V. A., & Borum, R. (1999). Can involuntary outpatient commitment reduce hospital recidivism?:

findings from a randomized trial with severely mentally ill individuals. *American Journal of Psychiatry, 156*(12), 1968-1975.

Teplin, L. A. (1983). The criminalization of the mentally ill: speculation in search of data. *Psychological Bulletin, 94*(1), 54-67.

Teplin, L. A., Abram, K. M., & McClelland, G. M. (1994). Does psychiatric disorder predict violent crime among released jail detainees? A six-year longitudinal study. *American Psychologist, 49*(4), 335-342.

Tesak, J., & Code, C. (2008). *Milestones in the history of aphasia: theories and protagonists*. New York, NY: Psychology Press.

Texas. (2008). Health and safety code. Retrieved from ftp://ftp.legis.state.tx.us/bills/76R/billtext/html/senate_resolutions/SR01100_SR01199/SR01159F.HTM

Tournay-Theodotou, P. (2014). Racial and Gender-cross-dressing in Caryl Phillips's Dancing in the Dark. *Interactions, 23*(1), 263.

Trevelyan, G. (2002). *England under the Stuarts*. London, U.K.: Routledge.

Walton, J. K. (1979). Lunacy in the Industrial Revolution: A study of asylum admissions in Lancashire, 1848-50. *Journal of Social History, 13*(1), 1-22.

Warner, R. (2004). *Recovery from schizophrenia*. New York, NY: Psychology Press.

Watson, T. L., Bowers, W. A., & Andersen, A. E. (2000). Involuntary treatment of eating disorders. *American Journal of Psychiatry, 157*(11), 1806-1810.

Whitmer, G. E. (1980). From Hospitals to Jails: The Fate of California's Deinstitutionalized Mentally III. *American Journal of Orthopsychiatry, 50*(1), 65-75.

Williams, A. R., Cohen, S., & Ford, E. B. (2014). Statutory definitions of mental illness for involuntary hospitalization as related to substance use disorders. *Psychiatric Services, 65*(5), 634-640.

Witvliet, C., Phipps, K., Feldman, M., & Beckham, J. (2004). Posttraumatic mental and physical health correlates of forgiveness and religious coping in military veterans. *Journal of Traumatic Stress, 17*(3), 269-273.