

Emptying the 'New Asylums'



A Beds Capacity Model to Reduce Mental Illness Behind Bars

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A BEDS CAPACITY MODEL TO REDUCE MENTAL ILLNESS BEHIND BARS

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EXECUTIVE SUMMARY

In 2016, nearly 400,000 inmates in US jails and prisons were estimated to have a mental health condition. Of those inmates, an estimated 90,000 were defendants who had been arrested and jailed but had not come to trial because they were too disordered to understand the charges on which they were detained.¹ All but three states authorize evaluating the mental competency of such offenders within the jails or in the community,² and some states authorize treatment to restore competency outside a hospital. Yet, America's state hospitals remain the default option for providing pretrial mental health services to criminal defendants.³

The term *mentally ill* is used to describe criminal detainees with serious mental illness in this study by design. Person-first usage would render these defendants inmates first, mentally ill second. In reality, the vast majority of pretrial offenders who require competency services become ill first, then inmates, a critical distinction we believe will not be addressed unless it is frankly recognized.

– Treatment Advocacy Center

Beds in these hospitals are in dire and chronic short supply. After climbing to a peak of 337 beds per 100,000 persons in 1955, the movement to “deinstitutionalize” mental illness drove the state hospital bed population to 11.7 per 100,000 by early 2016.⁴ Although community and private hospitals expand the total universe of inpatient options for psychiatric patients somewhat,* their beds are largely occupied by insured patients who have voluntarily sought care. Patients referred by the criminal justice system typically are not eligible to use them.

The most widely recognized direct result of bed shortages is the virtually universal phenomenon known as “boarding” — the practice of holding psychiatric patients for extended periods in hospital emergency departments (ED) until beds become available. Bed waits by mentally ill detainees in jails are the forensic equivalent, and they are nearly as widespread.

State hospitals dedicate an increasing percentage of their beds to the inmate population, but demand outstrips supply. As a result, the majority of state hospitals maintain bed-wait lists of inmates who have been court-ordered or otherwise referred for incompetent to stand trial (IST) services.⁵ In most states, these waits are around 30 days, but three states have reported forensic bed waits of six months to a year.⁶ In a sample of 25 states for its 2016 state hospital bed survey, the Treatment Advocacy Center found that 75% (18) of the states wait-listed pretrial detainees, and nearly 2,000 pretrial inmates were on waitlists in those states.⁷

Historically, state hospitals were called “asylums” because they were associated with long-term care and protection.^{8,9} Incarcerating pretrial and convicted criminal offenders with serious mental illness is so common today that jails and prisons are routinely called the “new asylums.” They are anything but protective.

Behind bars, inmates with mental illness are at heightened risk for victimization, including assault and sexual abuse. They are also more likely to attempt or complete suicide, which is the leading cause of death in US jails.¹⁰ And the number of inmates with mental illness is growing, particularly among those awaiting IST services. In 2016, the population of pretrial

* The US government does not report psychiatric bed data in a format that makes it possible to determine the complete and comprehensive population of private and public mental health beds in America.

detainees with mental illness was estimated to have grown 32.5% in Wisconsin, 76.3% in Washington, 90.0% in Oregon and 350% in Los Angeles County over varying stretches of the 21st century.¹¹ In 2015, Colorado reported a 500% increase in referrals to the state hospital for pretrial competency evaluations over a 10-year period. Many states report that the largest category of patients they serve in their hospitals are pretrial defendants who have been found IST.^{12,13}

Increasingly, the courts are ruling the waitlisting of these detainees to be illegal. Since January 1, 2014, public agencies and officials in more than a dozen states have been sued or threatened with legal action for violating the constitutional rights of pretrial prisoners (see Appendix A: Litigation Associated with Pretrial Forensic Bed Waits). In Alabama, for example, the American Civil Liberties Union is suing the state mental health commissioner over bed waits that average eight months for unconvicted detainees.¹⁴

All the while, the mentally ill inmates themselves languish, deteriorate further and sometimes die behind bars as they wait for a bed to open in the “old asylums.”

Emptying the ‘New Asylums’ was undertaken to apply queueing theory (the study of waiting) to the forensic bed emergency as a means of projecting the impact of changing specific public policies and practices on forensic bed waits in jails. Computer modeling offers a mathematical approach to examining systems as they exist and then projecting the results of introducing small changes into those systems. For this study, the Treatment Advocacy Center contracted with the University of North Carolina (UNC), where researchers had developed a discrete-event simulation model to project the number of civil beds needed to reduce hospital ED boarding in one region of the state. For *Emptying the ‘New Asylums,’* UNC developed a forensic bed-wait model based on queueing theory, a branch of mathematics that deals with the study of waiting lines or queues. The model was applied to forensic bed-wait data collected by the Treatment Advocacy Center from a five-state sample: Florida, Maine, New Jersey, Texas and Wisconsin.

The results of this undertaking show how forensic bed waits can be reduced to either three days or to 14 days by changing only one of three variables:

- Demand for beds represented by mentally ill inmates being added to waitlists
- Average lengths of stay for forensic patients receiving pretrial competency services
- Supply of staffed beds available to provide those services.

The model validates that relatively small changes to specific variables that are determined or influenced by public policy could significantly reduce forensic bed waits. The following examples illustrate the outcomes projected by modeling data from the sample states:[†]

- Diverting two mentally ill offenders per month from the criminal justice system in Florida reduced the average forensic bed wait in the state by 75%. From an average wait of 12 days in early 2016, the average wait fell to three days.
- Reducing the average length of stay for competency services by less than 2% in Texas — from 189 to 186 days — increased forensic bed capacity sufficiently to reduce bed waits from 61 to 14 days.
- Increasing the number of forensic beds by 11% in Wisconsin — from 70 beds to 78 beds — reduced IST bed waits from 57 days to 14 days.

[†] Projections are based on data collected from Florida, Maine, New Jersey and Texas in early 2016 and from Wisconsin current to September 1, 2016. They serve as examples but will not correlate with data that have changed in the interim or with more detailed data that were not included in this model.

This model demonstrates the direct and dramatic relationship between bed supply and forensic bed waits. Especially in states where psychiatric beds exist but are not occupied because they are not staffed, it suggests that merely opening existing beds could immediately reduce waitlists and their human and economic costs without expanding psychiatric facilities.

Assessing the net public costs associated with changes such as these was outside the scope of the study. Given the high cost of incarcerating offenders with mental illness,¹⁵ the direct and indirect costs that result from bed shortages, and the legal costs incurred by states defending themselves against constitutional challenges over forensic bed waits, such analysis would be useful. In the meantime, it does not require advanced economics to conclude that staffing existing beds is more economical than building new ones or that diverting people in psychiatric crisis out of the criminal justice system is cheaper than jailing them. The IST bed capacity model described in this paper not only validates that small changes to selected variables could reduce forensic bed waits, it suggests that these waits could be reduced for a relatively modest investment compared with the status quo.

Modeling is no road map for escaping the psychiatric bed shortage. Pretrial detainees with mental illness are just one of the populations affected by bed shortages. Reducing their need for beds still leaves untold numbers of convicted inmates with mental illness incarcerated without treatment, as well as countless nonforensic patients waiting in or turned away from hospital emergency rooms because of civil bed shortages.

Additionally, being hospitalized to restore legal competency is not to be confused with inpatient treatment to achieve long-term wellness, recovery from mental illness symptoms or successful re-entry into the community.¹⁶ Criminal defendants have an inalienable right to understand the proceedings against them and to assist in their own defense. IST services[‡] are designed to assess that capacity and, if lacking, restore it to the point that defendants understand why they are being tried and can participate in the proceedings against them. Legally unrelated to the defendant's mental condition at the time of the charged crime, "competency" in this context is a famously low bar. In many jurisdictions, a defendant's ability to answer "Yes" to the question, "Do you understand the charges against you?" is enough for a court to find a defendant competent, assuring that only individuals with the most profound illness are found incompetent and hospitalized for competency restoration.

Nonetheless, IST services are an urgent issue for the inmates whose criminal proceedings cannot move forward and for the state health care and criminal justice systems struggling to keep up with the growing tide of pretrial detainees with serious mental illness. Anecdotes abound of law enforcement using "mercy bookings" into jail to get people in psychiatric distress off the streets and of judges ordering IST services because no other treatment options are available.^{17,18} Being held behind bars while so disordered that IST services are needed is unhealthy for criminal detainees in psychiatric crisis, most of whom have been arrested for minor, nonviolent crimes.¹⁹⁻²¹ At the same time, turning jails into asylums requires corrections personnel who are not mental health professionals to perform mental health management activities,²² exacerbates jail overcrowding and mass incarceration,²³ and adds an arrest record to the already daunting obstacles individuals with serious mental illness face in finding housing and jobs.

[‡] Competency evaluation and restoration are also referred to in some states as not competent to stand trial (NCTST), incompetent to proceed to trial (IPT) or other terms. The more widely used IST is used in this study for all otherwise-named services with the purpose of evaluating or restoring competency to stand trial on criminal charges.

Boarding psychiatric patients in community hospital emergency rooms has been called “the canary in the coal mine” of America’s bed shortage.²⁴ Forensic bed waits are the canary’s mate.

There is no fast or easy fix for the mental health system failures that have taken half a century to develop. In an ideal world, individuals with acute or chronic psychiatric distress should not have to worry about wait times in jail for mental health beds because they would receive timely and effective treatment when they needed it and jail diversion when their symptoms led to criminal justice involvement. Under current less-than-ideal circumstances, reducing inmate bed waits and ED boarding will require implementing a combination of strategies that reduce forensic bed demand, increase bed supplies or both.

Computer modeling offers policymakers and mental health officials a mathematical tool for developing evidence-based policy and practice to break the logjam of inmates with mental illness who are unable to come to trial because they are too sick. Although it would not address the hospitalization needs of the other populations, this step alone could moderate the nation’s bed shortage, reduce mass incarceration of people with mental illness and make existing beds available to more patients.

That would be a start.

BACKGROUND

The United States is experiencing a psychiatric bed shortage unmatched since the reform movement of the mid-1800s led to development of the state mental hospital system.

In 1955, there were 560,000 public beds available for an estimated 3.3 million adults living with serious mental illness (SMI) and other disabilities in the United States. By early 2016, slightly fewer than 38,000 of those state hospital beds remained for 8.1 million people with the same conditions.²⁵ Even after including private, community and other hospitals, the United States ranks near the bottom of the world in psychiatric beds per 100,000 people.²⁶ At the same time, the nation incarcerates more mentally ill inmates than any other.²⁷

Treatment advances in the 1950s have made it possible for most patients with SMI to live safely and successfully in the community. However, these advances do not provide symptom relief to a significant subset of people with treatment-resistant forms of SMI, which do not respond to known therapies such as medication. Nor do the advances address the complication that about half of the people with SMI do not adhere to the medications they are prescribed.^{28,29} For patients with symptoms severe enough to meet state criteria for commitment to a hospital, and for thousands of criminal offenders with mental illness, state hospitals remain the default treatment option.

The number of such last-resort beds is in dire short supply. The Treatment Advocacy Center's 2016 state survey, *Going, Going, Gone: Trends and Consequences of Eliminating State Psychiatric Beds*, includes a summary of the situation:

The number of state hospital beds that remain to serve the nation's most ill and potentially dangerous psychiatric patients has fallen to its lowest level on record, setting off a domino effect of unmet need coast to coast. Largely reserved for those individuals considered unsuccessfully treated and/or too dangerous for other health care settings, state hospitals today are the last resort of the mental health system. When there are no beds for them, people who can't be treated elsewhere instead cycle through other institutions or live on the streets. They crowd into emergency rooms and languish behind bars, waiting for beds to open. Some become violent or, more often, the victims of violence. They grow sicker and die. The personal and public costs are incalculable.³⁰

The most widely recognized direct result of bed shortages is the phenomenon known as "boarding" — the practice of holding psychiatric patients for extended periods in hospital EDs until beds become available.

The American College of Emergency Physicians (ACEP) reports that ED boarding is virtually universal in the United States. In 2016, half of ED doctors surveyed by ACEP said at least one psychiatric patient is boarded in their emergency rooms every day because no bed is available, with some patients waiting weeks for hospital admission.³¹ Elsewhere, one in five surveyed physicians have reported psychiatric patients waiting in their EDs from two to five days for hospital admission,³² and one in 10 emergency rooms have reported that patients in mental health crisis are boarded for weeks at a time.³³ Boarding is now so rampant that an article in a staid American Psychiatric Association publication called it a "scourge" on general hospitals.³⁴

Bed waitlists in US jails are to mentally ill inmates what boarding is to mentally ill patients in the ED, and they are nearly as widespread.

- Out of the 39 state hospitals responding to a 2014 industry survey, 75% said demand for forensic services in their states had increased “a lot” or “moderately” in recent years. Only four states reported no change in forensic service demands; none reported that demand had decreased.³⁵
- Of 40 state hospital officials responding to a 2015 survey, 78% reported maintaining waitlists for forensic beds. The waits were “in the 30-day range” in most states, but three states reported forensic bed waits of six months to one year.³⁶
- From January 1, 2014, through November 30, 2016, at least 13 states were sued, threatened with legal action or entered settlements over constitutional violations originating in bed waits for pretrial mentally ill detainees (see Appendix A: Litigation Associated with Pretrial Forensic Bed Waits).³⁷

When a sufficient number of beds to serve the patient populations originating from both the health care and corrections systems is not available, somebody has to wait.

Civil patients (those who have not committed crimes) initially wait in hospital EDs.³⁸ Some civil patients can be admitted to private or other psychiatric facilities, but nonoffenders who are violent or dangerous or who otherwise meet civil commitment criteria cannot be. In addition, poor, uninsured patients are more likely than other patients to be turned away from private hospitals.^{39,40} This leaves the same state hospitals that are treating IST patients to serve them, if they are served at all. Unsurprisingly, the sickest nonoffenders — including those who are suicidal — are reported to have the longest ED waits, because beds for them are the least available.⁴¹ An unknown number of those people ultimately leave EDs without getting help and may go on to commit crimes — typically misdemeanors and nuisance offenses — after which they finally are sent to a hospital.⁴² As this cycle unfolds, patients who have come to EDs with other health emergencies may encounter delays and find themselves in close proximity to patients whose symptoms can be frightening.⁴³

Patients in the corrections system typically wait behind bars, producing the bed waits addressed in this study.

“Intensifying the impact on civil patients (of prioritizing forensic patients over them) was the length of stay for pretrial patients who require treatment to restore their competency to stand trial. ‘With nearly one-quarter of these individuals staying more than one year, Colorado Mental Health Institute at Pueblo is forced to use a larger and larger portion of its civil beds to serve this population. The combination of increased admissions and longer lengths of stay is the driving force behind a projected shortage of beds over the next decade.’”

— Doris A. Fuller, et al.
Going, Going, Gone: Trends and Consequences of Eliminating State Psychiatric Beds, 2016
Treatment Advocacy Center

In May 2016, a straightforward metric to better align the supply of psychiatric beds with the need for them was reported in *Psychiatric Services*, a journal of the American Psychiatric Association. Elizabeth La and colleagues from the University of North Carolina (UNC) and Duke University described their use of a discrete-event simulation model to project how many additional nonforensic psychiatric beds would be needed in one region of North Carolina to reduce average bed waits in EDs to less than one day.⁴⁴ The premise was that “if, for example, ED boarding times of 24 hours are adopted as an acceptable upper limit, the need for adding beds or their functional equivalent can be clearly quantified.”⁴⁵

The Treatment Advocacy Center subsequently contracted with a team of modelers from UNC at Chapel Hill’s Gillings School of Global Public Health and North Carolina State University’s Edward P. Fitts Department of Industrial and Systems Engineering to develop a computer model that applied queueing theory to study pretrial bed waits. With political and economic obstacles largely blocking the most straightforward means of reducing forensic bed waits and ED boarding — that is, by adding new psychiatric beds — the model was conceived to estimate the impact on average forensic bed waits of modifying practice around three variables:

- The arrival rate at which additional mentally ill inmates are deemed in need of competency services and are added to bed waitlists
- The average (mean) length of forensic stays in beds used for competency services
- The supply of staffed beds available for pretrial evaluation and/or restoration.

METHODOLOGY

Computer modeling offers an approach to bringing to life assumptions about cause and effect and system behavior. If it is possible to describe a system and how events transform the system over time, then it is also possible to use a computer model to project these rules forward. The human brain is not good at intuiting complex dynamics;⁴⁶ thus, models can support learning and decision-making.

In the case of forensic bed waits, the dynamics that need to be understood have been long studied in the fields of mathematics, probability and operations research. Queueing theory, which involves the study of waiting lines or queues,⁴⁷ originated with Agner Erlang, a Danish mathematician who created models to describe waiting times at the Copenhagen telephone exchange.⁴⁸ Since then, the theory has been applied to telecommunication, traffic engineering, computing, factory design and health care, including hospital bed use (e.g., the impact of bed-assignment policies on use, waiting time and the probability of turning away patients).⁴⁹ Although real-world queueing systems are often quite complex, it can be useful to learn how they behave by studying simplified versions of reality.

The queueing model used for this IST-capacity estimation is an M/M/S model[§], for which the following rules apply:

1. There are S identical service units (here, beds)
2. Both the number of arrivals and the people served by a single server in a given amount of time are distributed according to a Poisson distribution (commonly used to describe variation in data for arrivals and service)
3. Service is provided to those who have waited the longest or who are in the front of the line, either literally or on a list
4. The system does not shut down but runs continuously in a steady state.

Forensic beds may be occupied by patients in several criminal justice categories:

- Pretrial criminal defendants who require competency evaluation or restoration before they can go to court for their charged crimes. Courts in all states may order competency services for these inmates; in some states, jail or medical personnel or others may make referrals.
- Criminal defendants who, despite treatment, are deemed unrestorable to competency
- Criminal defendants being treated in lieu of conviction after being tried and found not guilty by reason of insanity (NGRI)
- Convicted offenders found guilty but mentally ill (GBMI), an alternative to acquittal by reason of insanity
- Convicted offenders undergoing pre-sentencing evaluations
- Sentenced offenders in need of treatment, presumably including many of the estimated 30,000 state prisoners with mental illness who are in solitary confinement
- In some states, sexual offenders.

[§] An M/M/S queueing model assumes a single queue feeding more than one parallel servers.

Patients found NGRI or GBMI occupy an estimated 50% of state forensic beds in the United States and may remain hospitalized for years, even decades,⁵⁰ dramatically reducing the number of beds available for other patients. These patients were excluded from the queueing model in order to focus on IST patients, whose hospital stays are shorter, subject to flexible public policy and, ultimately, affect detainees who have not even been tried, much less convicted of a crime. This subpopulation makes up the largest and fastest-growing population competing for forensic beds^{51,52} and has a correspondingly large and growing impact on corrections systems, state hospitals and bed waitlists. Although the forces involved in forensic bed use are more complex than is indicated here, focusing on pretrial detainees was deemed a reasonable strategy for illuminating the magnitude of change that is needed to qualitatively affect wait times.

Florida, Maine, New Jersey, Texas and Wisconsin were selected for this illustrative analysis based on geographical location, system-level consistencies among them and the availability of forensic bed and waitlist data. Data were collected from all five states by the Treatment Advocacy Center during the first quarter of 2016 in conjunction with the authors' survey of state hospital bed population trends.⁵³ In the summer of 2016, state mental health directors were directly solicited to provide more detailed and current data to improve the accuracy of projections from the computer model (see Appendix B: Forensic Data Points for IST Bed Capacity Estimation Model). Only Wisconsin responded to the inquiry and provided data current to September 1, 2016.

The variables of bed demand represented by arrival rate in the bed queue, length of stay and bed supply were selected for modeling because data to model their impact were available, they are all known to influence competency service capacity and they are within the purview of policymakers to change.

Several different computational scenarios were run to answer three key questions.

- How many fewer inmates reaching the waitlist would be required to reduce the average bed wait to drop to three days or to 14 days?
- How many days would the average hospital length of stay (LOS) need to be decreased to reduce the average wait time to three or to 14 days?
- How many beds would need to be added to reduce average wait time for pretrial inmates to three or to 14 days?

Illustrative results are summarized in Table 1. For each state, the following four data points were used to model estimates:

- Average number of days on the bed waitlist
- Average number of people on the bed waitlist at any time
- Average number of people arriving to the system each day (i.e., arrested and added to the waitlist by court order or other means)
- Number and percentage of forensic beds effectively dedicated to IST services (competency evaluation and/or restoration).

To accommodate the limitations of modeling complex systems and to maintain a status quo steady state (with the assumption that bed occupancy rates cannot exceed 100%), modelers adjusted the numbers based on information and understanding of the relevant systems within each state. As a result, the data points used in the model may not, in all cases, exactly replicate the numbers collected from a given state.

FINDINGS

For each scenario, the M/M/S queueing model was used (implemented in Microsoft Excel) to estimate how much change was needed to obtain an average wait for restoration of three and 14 days by changing a key variable to each scenario, one at a time.

Table 1 illustrates the finding that relatively small adjustments were needed in any one of the three variables. The following are additional scenarios.

- In Texas, adding 21 beds reduced average bed wait from 61 days to three days.
- Adding even seven beds in Texas reduced waits from 61 days to 14 days.
- Without adding new beds, Texas reduced waits to an average of three days by reducing the arrival rate of new inmates to the waitlist 2%, from 193 detainees per month to 189.
- In Texas, reducing the average hospital LOS from 189 days to 186 days also had the effect of reducing average forensic bed waits to three days.
- In Wisconsin, increasing the number of forensic beds by 11% — from 70 to 78 beds — reduced waits for competency services from 57 to 14 days.
- In Wisconsin and New Jersey, average bed waits fell by more than half, to less than 14 days, by diverting only one additional detainee per month from the waitlist.
- In Florida, diverting two mentally ill offenders per month reduced the average forensic bed wait in the state by 75%, from an average of 12 days to three days.
- In Maine and Florida, where there already are sufficient beds to reduce average bed waits to fewer than 14 days, bed waits could be cut to fewer than three days by reducing hospital LOS by less than 5% (fewer than three days in Maine and 13 days in Florida).

It does not require advanced economics to conclude that staffing existing beds is more economical than building new ones or that diverting people in psychiatric crisis out of the criminal justice system is cheaper than jailing them.

In all cases, the projections represent estimates based on 2016 data; they may not represent current circumstances or real-world operations when circumstances beyond the scope of the model are included (e.g., statutory requirements, regulations, judicial discretion).

Table 1: Results from IST Beds Capacity Estimation Model

	FLORIDA	MAINE	NEW JERSEY	TEXAS	WISCONSIN
Average number of days on bed waitlist	12.0	7.9	39.0	60.9	70.0
Average number of inmates on bed waitlist	45.5	5.2	38.0	392.0	57.0
Occupancy rate	99.0%	92.0%	98.0%	100.0%	98.0%
PROJECTED CHANGES TO REDUCE BED WAITS					
Average number of inmates added to the waitlist per month	120.7	19.7	29.3	192.9	24.6
To reduce average wait time to three days	119.1	18.6	27.9	189.5	22.4
To reduce average wait time to 14 days	120.8	20.2	28.8	191.8	23.8
Average length of stay (days) in forensic beds	267	53	308	189	90
To reduce average wait time to three days	264	52	294	186	82
To reduce average wait time to 14 days	267	54	303	188	87
Number of forensic beds for pretrial inmates	1,087	38	306	1,218	75
To reduce average wait time to three days	1,101	40	320	1,239	82
To reduce average wait time to 14 days	1,086	37	311	1,225	78

SOURCES: From 2016 beds data developed by the Treatment Advocacy Center; queueing model developed by the University of North Carolina at Chapel Hill's Gillings School of Global Public Health and North Carolina State University's Fitts Department of Industrial and Systems Engineering.

Miami's Response to Florida's Forensic Mental Health Crisis

In 2006, demand for court-ordered incompetent to stand trial (IST)^{††} services in Florida was skyrocketing. Between 1999 and 2006, new forensic commitments increased by an average of more than 8% annually, with an unprecedented 16% increase between 2005 and 2006. The average wait for a state hospital bed was nearly three months. The secretary of the Department of Children and Family Services, responsible for state mental health, was found in criminal contempt of court and threatened with an \$80,000 personal fine and jail time for failing to move detainees into treatment facilities within 15 days, as mandated by state law. In response to this crisis, the Florida Supreme Court convened a task force, chaired by Miami-Dade County Court Judge Steve Leifman, to examine issues relating to the disproportionate representation of people with serious mental illness (SMI) involved in the justice system and to come up with solutions.

Although the growth trend continued for two more years — by 2008, new annual forensic commitments were up 80% over the previous decade, and total individuals served in forensic commitment increased by nearly 90% — the strategies that emerged from this crisis relieved forensic bed demand on state hospitals and significantly improved the prospects for individuals with SMI who came in contact with the criminal justice system. Between 2008 and 2014, the total number of individuals served in forensic commitment decreased by 21%, while growth in new forensic commitments slowed to an average of less than 1% annually.

The success of these efforts resulted from a number of factors, including reduced length of stay (LOS) for IST patients. But the most significant contributor may be implementation and expansion of strategies aimed at diverting individuals from hospital admission to begin with and providing more opportunities for community-based treatment and services for those who are arrested. Nowhere has the impact been more visible than in Miami-Dade County.

Miami-Dade County: Better Results for Less Money

Miami-Dade County has the largest percentage of people with SMI of any urban community in America: an estimated 9.1% of the population, 192,000 adults, in 2016. Fewer than one in 10 of this population receives state-funded community mental health services in any given year, and it is estimated that nearly 11,000 are arrested annually. The Miami-Dade County jail is the largest psychiatric institution in the state.

The 11th Judicial Circuit Criminal Mental Health Project (CMHP) was established to divert individuals with SMI who do not pose significant public safety risks away from the criminal justice system and into comprehensive community-based treatment and support services. The project consists of pre-arrest and post-arrest diversion programs.

Pre-arrest diversion focuses on providing Crisis Intervention Team (CIT) training so that law enforcement officers are better prepared to de-escalate mental health crises in the community and divert to treatment, in lieu of making an arrest, when appropriate. To date, more than 4,700 officers from all 36 municipalities in the county have been trained. From 2010 through 2015, CIT officers from the two largest agencies — the Miami-Dade and City of Miami Police departments — responded to more than 60,000 mental health calls. The training is credited for the remarkable outcomes: a total of 12,340 diversions to treatment and just 119 arrests.

Reducing the number of individuals with mental illness booked into jail in need of IST services not only reduced hospital bed demand but reduced jail bed demand as well. The county's jail population went from a daily average of 7,200 inmates to less than 4,000. One jail facility has been closed since the CIT pre-arrest diversion practice became widespread, resulting in a \$12 million savings annually.

^{††} Florida uses the term *incompetent to proceed to trial* (ITP). The more common term, *incompetent to stand trial* (IST) is used here for consistency with the terminology of the study.

For some individuals charged with crimes who would have gone to the state hospital for competency services in the past, there is the Miami-Dade Forensic Alternative Center — MD-FAC, for short.

MD-FAC was opened in August 2009 as a partnership between the CMHP and the Florida Department of Children and Families and was a direct result of the work the state Supreme Court task force convened three years earlier. The program serves adults without significant histories of violent felony offenses who are adjudicated IST and who otherwise would be admitted to a state hospital. The program consists of a locked, 16-bed unit located in the local community where participants receive competency restoration services, recovery support and mental illness management training, community re-entry education, and assistance in obtaining entitlement benefits and other means of economic self-sufficiency needed following discharge.

Once it is determined that an individual is competent to proceed or no longer requires placement in a locked treatment setting, a report is prepared and submitted to the court that includes a treatment summary and recommendations for community placement. Unlike individuals admitted to state hospitals, individuals admitted to the MD-FAC program are not rebooked into the county jail following discharge from IST services. This reduces demands on the jail and eliminates the possibility that individuals will decompensate while incarcerated and require subsequent readmission to a state hospital. It also ensures that individuals remain linked to their treatment team through the community re-entry and re-integration process.

Upon approval of the community re-entry plan by the court, individuals are stepped down into community placements. MD-FAC continues to monitor progress in the community for one year to ensure ongoing linkages to necessary treatment and support services. Individuals whose legal cases have been resolved and no longer have any court obligations are free to decline services following discharge; however, most — about 80% — opt to continue to work with the program.

Results

The results have been impressive. For 33 patients treated at MD-FAC from August 2011 through December 2014 and followed for one year after discharge — compared with a demographically comparable group of patients forensically committed to the state hospital:

- Average length of stay was 33% shorter: 146 days in MD-FAC compared with 219 days in the state hospital
- Cost per patient was more than 58% lower: \$33,667 at MD-FAC, \$74,419 in the state hospital
- Admission to MD-FAC doubled the chances a patient would not return to jail: 45% of the MD-FAC participants were not re-arrested in the year following discharge; 21% of the state hospital patients were not re-arrested
- Jail days for individuals who were re-arrested after discharge were 61% lower: 26 days for MD-FAC participants, 47 days for state hospital patients.

In sum, a patient admitted to MD-FAC had twice the chance of staying out of jail the year following discharge after a length of stay that was one-third shorter at a cost half as much compared to a forensic patient admitted to a state hospital.

Although MD-FAC contains only 16 beds, county officials say they are sufficient to handle qualifying defendants in need of competency services. This has resulted in 15% to 20% fewer admissions per year to state hospitals from the county. In addition to other outcomes, that makes 16 additional beds available for other patients at the state hospital.

LIMITATIONS

With the exception of Wisconsin's updated and more complete data points, data collection was conducted in conjunction with *Going, Going, Gone*, the Treatment Advocacy Center's 2016 state hospital bed survey and is subject to the same limitations.

Limitations of the study include inconsistent data sets or timing resulting from variations in the laws that regulate state hospital beds and/or the techniques states use to collect data and report their statistics. For example, some states maintain real-time bed registries; others report bed counts weekly, monthly or annually. Forensic bed waits also are tracked and reported differently among the states; some report daily totals, while others average waits by the week or month. The average time inmates spend on a forensic wait list was subject to whether states prioritized patients and on what basis, such as clinical need or date of court order. Hospital bed numbers are subject to circumstances that can change daily, even hourly. This affects the precision of numbers on any given date but does not materially affect the trends they reveal.⁵⁴

Because Wisconsin provided more comprehensive and more recent data, projections for that state may be more accurate than projections for Florida, Maine, New Jersey and Texas; however, all the projections should be viewed as illustrations. Because Maine's forensic population and bed waits are relatively small, they are subject to more distortion and illustrate limitations of the model when applied to small populations. In addition, applying the model to pretrial inmates alone precludes addressing bed waits by other classes of forensic patients.

Given that the data obtained are not perfectly accurate reflections of the entire system, assumptions were required during model formulation that may not fully or accurately reflect the real-world system in operation in the sample states today. To the degree they are not, the precision of the projections derived from the model will be compromised.

The queueing model also fails to capture the effect of human intervention. An example is bed occupancy. Some states do not designate forensic beds or divert beds officially designated for other populations to forensic purposes. The hospitals are therefore operating over capacity, resulting in a bed occupancy rate of more than 100%. The model does not permit simulations based on an occupancy rate of more than 100%, as it cannot simulate more bed use

than beds are available. Thus, to assure a stable queue for the model, the modelers in some cases added enough beds to a state's forensic bed count to be consistent with the state's data. A more realistic portrayal of bed occupancy would be one that recognizes that humans may intervene (e.g., with court orders, priority waiting lists and in response to other changing conditions).

“Police officers have increasingly become the first, and often only, responders to people in crisis due to untreated mental illnesses.”

— GOB Project 193: Mental health diversion facility service capacity and fiscal impact estimates
Miami-Dade County
June 9, 2016

DISCUSSION

In fully functioning mental health systems, individuals with severe mental illness receive timely and effective diagnosis, treatment and support that make it possible for them to live safely and successfully in the community with the same level of contact with law enforcement and the criminal justice system that other citizens experience.

Such a system does not exist in the United States. Significantly more time elapses between the onset of psychotic symptoms and diagnosis and treatment in the United States than in other countries.⁵⁵ When people with SMI finally do receive treatment, they are typically more profoundly ill; about half receive no treatment at all in any given year.⁵⁶

At the same time, close to two million adults with mental health conditions are arrested annually, and almost 100,000 of them are deemed in need of an evaluation to determine whether they are competent to stand trial. In many states, those who require competency services wait, untreated, in jail because there are no available treatment beds for them.

The IST capacity estimation model developed for *Emptying the 'New Asylums'* demonstrates that relatively small adjustments in any one of three key variables in the competency process significantly alters how long inmates wait. The model is flexible. It could be expanded to add other variables, such as the impact of providing more IST services outside of state hospitals or dropping misdemeanor charges when the probable length of time to evaluate and restore competency exceeds the maximum possible sentence for the crime. The model also could be refined with additional data to produce more targeted results, such as how changing a variable affects bed waits for specific offenses (e.g., misdemeanor and felony or different classes of felony offenses).

For the purposes of illustrating the model's potential, only three variables were modeled — all within reach of policymakers: bed demand represented by pretrial inmates being added to forensic bed waitlists, average pretrial length of stay in the hospital and the absolute number of beds available.

Bed Demand

Pretrial bed demand is reflected in the model as the rate at which new detainees are added to bed waitlists by being arrested and deemed in need of IST services in the state hospital. Methods for IST referral vary by state and locale, with some states and agencies requiring a court order and others also using referrals by jail or medical personnel or others.

By whatever manner detainees reach the waitlist, and for whatever purpose they are wait-listed (evaluation to determine competency, competency restoration following previous evaluation elsewhere and/or evaluation followed by restoration), the net effect is the same: they become part of a significant subpopulation of mentally ill inmates who swell jail populations with people who are too ill to be tried and, typically, are not receiving treatment.^{57,58}

Most inmates referred to IST evaluation have been arrested for misdemeanor offenses such as vagrancy, shoplifting or violation of community nuisance laws.⁵⁹ Felony charges include nonviolent offenses such as car theft and some drug offenses, as well as violent felonies. An indeterminate number of mentally ill detainees spend longer in jail, waiting to have their legal competency evaluated or restored, than they would have spent if convicted and sentenced for their original offense. Some of these detainees already have been hospitalized, deemed "restored" to competency and returned to jail, only to deteriorate so thoroughly before coming to trial that they cycle through the competency process anew.

Better than diverting mentally ill inmates once their behavior results in their arrest is diverting them before they are arrested at all. Several evidence-based practices have been found effective to this end. Assertive community treatment (ACT) teams and forensic (FACT) teams and court-ordered treatment in the community (often called assisted outpatient treatment, or AOT) have consistently been found to reduce arrests and thus incarceration (and the need for IST services) among individuals with SMI who struggle to stay in treatment.^{60,61} Walk-in psychiatric centers, local or regional crisis facilities, emergency respite and other acute-care options that provide timely intervention are known to reduce the risk of criminal behavior and, thus, arrest. Crisis Intervention Team (CIT) de-escalation training and mobile crisis teams that integrate clinical workers into police response units have been found to reduce arrest and incarceration rates once police respond to a call involving a mental health crisis.⁶²⁻⁶⁴

The impact on forensic bed demand that results from reducing the number of people deemed in need of an IST bed has been tested in real time in Miami-Dade County, Florida. There, individuals at risk for arrest for “minor criminal behavior” who appear to be mentally disordered are taken directly to crisis stabilization facilities in the community in lieu of being arrested. Among those who are arrested, many are diverted into a community-based IST alternative to the state hospital system. Between the two programs, the county estimates that 2,610 jail bookings and 70,255 inmate jail days were avoided in 2015, for an estimated cost avoidance of \$14.3 million.⁶⁵ (See “Miami’s Response to Florida’s Forensic Mental Health Crisis” on page 12 for details.)

Our queuing model illustrates how dramatically the diversion of even small numbers of individuals with mental illness from the criminal justice system could reduce forensic bed demand and, with it, jail populations. The reduction in human suffering that comes from being acutely ill and behind bars is equally dramatic but not quantifiable.

Re-examining Length of Stay

Long psychiatric hospitalizations are not an issue in the United States. To the contrary, in another byproduct of overall psychiatric bed shortages, median length of stay for mental health treatment of civil patients has been shrinking for decades and is among the shortest in high-income countries.⁶⁶

The same is not true of hospitalization among US forensic patients. In the United States, forensic patients occupy roughly half of all remaining state hospital beds, and half of those beds are occupied by patients who have been found not guilty of a crime by reason of insanity.** These patients may remain hospitalized for decades or even a lifetime, effectively taking large numbers of hospital beds out of circulation. Pretrial inmates who require IST services and some convicted inmates with mental illness who require hospitalization vie for the remaining forensic beds.

The median LOS for pretrial services in 2016 was 189 days — a little more than six months.⁶⁷ In cases of defendants charged with less serious, low-level or nuisance offenses, this means many forensic patients spend longer in the hospital than they would if tried and convicted of their charged crimes, not to mention than if they were tried and found not guilty. In fact, at the end of their lengthy hospital stays, many mentally ill detainees do not go to trial at all;

** Individuals found guilty but mentally ill and sexually violent predators who have completed their prison sentences also may have extremely extended state hospital stays. Despite reaching the hospital via the criminal justice system, these long-term residents are reclassified as civil patients in some states.

instead, criminal charges are dropped because their hospitalization already constitutes time served for their charged crimes.⁶⁸

Ideally, the length of any psychiatric hospitalization is determined by a patient's treatment needs, and it ends when the need is fulfilled. Realistically, however, other factors play a role in LOS for competency services.

In most states, detainees can remain hospitalized for IST even though they are not ill enough to qualify for involuntary hospitalization under civil commitment laws.⁶⁹ This situation sets up the paradox that committing a crime creates hospital access closed to individuals in the community who are more ill. This contradiction is not lost on families desperate to intervene in a loved one's deterioration, on law enforcement trying to maintain community order, or on judges faced with profoundly ill citizens for whom few or no other treatment options exist. It also contributes to an average forensic LOS more than twice as long as nonforensic state hospital stays.⁷⁰

“Correctional facilities may be places that provide structure, . . . but jails and prisons should not be perceived of as places of sanctuary because they do not operate according to a therapeutic orientation and do not necessarily provide relief to persons in distress.”

— H. Richard Lamb and Linda Weinberger
Rediscovering the concept of asylum for persons
with serious mental illness, March 2016
*Journal of the American Academy
of Psychiatry and the Law*

Unlike other forensic or civil hospitalizations, IST hospitalization stays may be regulated by state laws, which vary dramatically. Some states require a court order before hospital discharge can take place, introducing court calendars and judicial discretion into LOS. Others allow discharge at the hospital's discretion.

Extended LOS unrelated to clinical circumstances can also delay civil discharges, effectively reducing bed supply. Virginia in November 2015, reported that an estimated 150 people had been on the commonwealth's "extraordinary barriers to discharge list" of state hospital patients considered "clinically ready for discharge" for more than one month; another 60 to 70 had been in the category for up to one month, all for lack of an appropriate

discharge setting.⁷¹ With a more complete continuum of care, these patients could leave the hospital sooner, making beds available for new patients. Maryland applied this concept to its forensic bed shortage in 2016, slashing the number of people on its forensic waitlist from 84 people in May to 12 people in mid-September. The state achieved the reduction by finding placements for long-term state hospital patients who had been deemed "medically ready" to leave the hospital but had not been released.⁷²

Additionally, restored patients in many states return to jail to await trial, and some of them deteriorate to the point that they return to the hospital to start over again. Sometimes called "riding the bus" because of the shuttle back and forth from jail to hospital and back again, this cycle reduces forensic bed capacity in much the same way extended LOS does. Los Angeles and Miami-Dade counties have estimated that 5% to 10% of their IST detainees are in this cycle at any given time.^{73,74}

Increasing Bed Supplies

Evidence that the United States does not have enough psychiatric beds to serve all the people with serious psychiatric diseases who need intensive care in a hospital is abundant.

Internationally, the Organization for Economic Cooperation and Development reports that, in 2013, the United States had 22 psychiatric beds of any kind (including substance abuse treatment) for every 100,000 people. This ranked the nation 31st among 35 member nations. In emergency rooms, according to a 2016 ACEP survey, 90% of emergency physicians said psychiatric patients were being boarded in EDs for lack of open beds.⁷⁵ In jails and prisons, forensic bed waits by thousands of mentally ill inmates tell the same story.

Neither the United States nor its individual states have conducted research to establish evidence-based bed supply targets for psychiatric beds serving any one population in need of them, much less all the populations. Based on a 2008 survey of psychiatric experts, including hospital directors, the Treatment Advocacy Center published the most commonly cited minimum psychiatric bed target for the United States: 40 to 60 beds per 100,000 people, with a consensus of 50 beds per 100,000 for children and adults and both civil and forensic patients.⁷⁶ Based on the 2015 US population, that comes out to 122,951 beds, more than three times the number of beds remaining in state hospitals.

The IST capacity model described here provides a mathematically based demonstration that some of this bed need can be met without massive hospital expansion programs. Beds already exist in state or private hospitals that are not staffed because of budget cuts or funding priorities; these could be opened. The Miami-Dade County forensic diversion illustrates that IST beds in community-based crisis stabilization facilities can reduce state hospital bed demand; these could be incentivized elsewhere. Maryland found that forensic bed waits can be cut by better managing LOS; other states could examine this option. The efficiencies and innovations suggested by IST capacity modeling are unlikely to fill the gap between psychiatric bed demand and supplies, but they would make more beds available than we have now, which would benefit us all.

RECOMMENDATIONS AND CONCLUSION

Pretrial forensic bed waits are only one symptom of the nation's dysfunctional mental health system. Eliminating all the symptoms will require far more comprehensive changes than this study addresses. For example, evaluating legal competency and restoring it in the community, rather than in state hospitals, is a worthy goal, but half the counties in the United States have no mental health professionals to provide such services. The psychiatric personnel shortage thus exacerbates the psychiatric bed shortage. Telemedicine might address both shortages but remains to be licensed or tested. Elsewhere in the system, moving some chronically ill or ready-to-discharge patients from state hospitals to appropriate residential settings would relieve intensive-care bed shortages, but those settings are few and far between.

Nonetheless, by enacting the 21st Century Cures Act in 2016, Congress and the White House signaled that serious mental illness is, at last, a national priority. They need to follow through by moving swiftly to implement the bill's provisions. States and the federal government should build on this foundation with additional reforms to further improve treatment for serious mental illness and decrease its criminalization. Especially in today's cost-conscious environment, policies and practices of modest cost and enormous potential may offer an opportunity to improve lives and communities and ultimately save money doing it.

State Recommendations

To reduce forensic bed waits and the human and economic toll they take, the Treatment Advocacy Center makes the following recommendations to state policymakers.

- **Reduce forensic bed demand before and after arrest** by expanding the use of diversion practices that have proven effective in keeping at-risk individuals with serious mental illness out of the criminal justice system. These include but are not limited to the following:
 - *Pre-arrest practices*, such as assertive community treatment (ACT)/forensic assertive community treatment (FACT), assisted outpatient treatment (AOT), Crisis Intervention Team (CIT) training, mobile crisis teams and other interventions that diminish or de-escalate encounters between individuals with mental illness and law enforcement
 - *Post-arrest practices*, such as expanded use of community-based competency evaluation and restoration, the Miami-Dade model of diverting mentally ill offenders to dedicated recovery-oriented facilities and mental health courts for qualifying offenders
 - *Post-competency practices* that stop the practice of sending forensic patients deemed competent back to jail, where they are at risk to deteriorate and be rehospitalized — for example, by releasing misdemeanor and nonviolent offenders into the community to await trial with ACT/FACT and/or AOT support and by discharging patients to immediate trial rather than back to jail
- **Examine and reform length of stay and discharge policies and practices** that operate without regard for the clinical status or needs of patients, whether forensic or civil. These include but are not limited to the following:
 - State laws or regulations that mandate protracted competency hospitalization for administrative reasons

- State laws that mandate extended state hospital stays unrelated to mental health status (e.g., to house sexual offenders)
- State laws that delay hospital discharge for administrative purposes
- **Increase psychiatric bed supplies** to the point that mentally ill inmates wait no more than three days, on average, for competency services to be initiated and psychiatric patients wait no longer, on average, than nonpsychiatric patients for hospital admission from emergency departments. Steps should include the following:
 - Increasing the supply of nonhospital, residential beds in the community for patients who are ready to leave the hospital but have no place to be discharged and for long-stay patients who do not require the level of service and security that state hospitals provide
 - Budgeting sufficient funds to staff and open existing state and other public hospital beds
 - Opening new beds
- **Invest in and use mathematically based planning tools**, such as the IST capacity estimation model described in this report, to develop evidence-based strategies for reducing forensic bed waitlists and, in turn, jail overcrowding and the misery and costs that come with hospital admission delays.

Federal Recommendations

Congress and relevant federal agencies are urged to realize the potential of the 21st Century Cures Act by taking the following further actions:

- **Fund provisions in the Cures Act that expand criminal justice diversion programs**, such as AOT and FACT
- **Fund programs in the Cures Act designed to grow the mental health work force**, including mental and behavioral health education and training grants and minority fellowships
- **Repeal the discriminatory Institutions for Mental Disease exclusion**, which severely limits Medicaid reimbursement for psychiatric inpatient care, thus erecting an arbitrary financial barrier to states or private providers opening new beds
- **Promote the practice of pre-arrest jail diversion** by funding the implementation of evidence-based programs such as Miami-Dade County's in jurisdictions nationwide.

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APPENDIX A

Litigation Associated with Pre-trial Forensic Bed Waits

STATE	LITIGANTS	DATE FILED	CLAIM
Alabama	<i>ACLU v. Taylor Hardin</i>	October 2016	Violation of constitutional rights of pretrial inmates who need mental health care by forcing them to wait months for admission to the state hospital
California	<i>Stiavetti v. Ahlin</i>	March 2015	Violation of court order that sheriff transfer pretrial prisoners from county jail to hospital in a timely manner; April 2016 court overruled motion to strike complaint
	<i>People v. Brewer</i>	August 2015	Violation of constitutional rights of pretrial inmates resulting from lengthy delays in transfer from county jail to treatment
	<i>RE Loveton, et al.</i>	February 2016	Upheld appeal that hospital admission for pretrial inmates take place within 60 days of a court's commitment order instead of the four weeks sought by petitioners
Colorado	Disability Law Colorado	April 2016	Colorado accused of violating federal agreement to reduce inmate evaluation wait times and alleged cover-up by state officials
	<i>Center for Legal Advocacy v. Bicha</i>	April 2012	Settlement entered by the parties, specifying that the state must evaluate or begin medical treatment of pretrial inmates deemed incompetent within 28 days of the initial court order; in 2015, plaintiffs filed a complaint with the court that the order is not being followed
Louisiana	<i>Advocacy Center, et al. v. Kathy Kliebert, et al.</i> and <i>Brandon Cooper, et al. v. Kathy Kliebert, et al.</i>	February 2016	Violation of constitutional rights and discrimination on the basis of disability resulting from failure to promptly transfer detainees found incompetent to stand trial from jail to hospital for treatment The plaintiffs in Cooper are individuals who have been adjudicated not guilty by reason of insanity.
Maryland	<i>Powell v. Maryland Dept. of Health & Mental Hygiene</i>	June 2016	Plaintiffs languishing unlawfully in jail or other detention facilities waiting for competency evaluation and treatment beds
Minnesota	Not yet filed	September 2016	In July 2013, Minnesota enacted a 48-hour rule for hospital admission following a court order for pretrial services. Minnesota Sheriffs' Association and Hennepin County sheriff are investigating legal options to force the state to follow the law.

Litigation Associated with Pretrial Forensic Bed Waits, continued

STATE	LITIGANTS	DATE FILED	CLAIM
Nevada	<i>Burnside, et al. v. Richard Whitley, et al.</i>	January 2014	<p>In January 2014, Nevada was placed under a consent decree to provide treatment within seven days.</p> <p>Counsel for the plaintiffs alleged that the state was failing to meet requirements of consent decree bed-wait times.</p> <p>December 2015 consent decree was modified, and the state was given until April 2016 to meet full compliance.</p>
New York	<i>Beverly Ann Griffin v. The City of New York</i>	September 2013	Negligence in the 2013 death of a mentally ill man at Rikers Island
Pennsylvania	<i>ACLU v. State of Pennsylvania</i>	2016	Reached settlement of class action over delays in treatment for defendants with mental illness
	<i>J.H. v. Dallas</i>	October 2015	Parties agreed to a settlement and created 120 new “placement options” for hundreds of mentally ill defendants court-ordered into hospital treatment but not being served.
South Carolina	<i>TRP and KW Class v. Dept. of Corrections</i>	January 2014	Parties agreed to a settlement of a 2005 lawsuit regarding the constitutionality of multiple practices involving mentally ill inmates, including extended bed waits for pretrial detainees.
Texas	<i>Disability Rights Texas v. Texas Dept. of Health</i>	July 2016	State is “keeping mentally ill suspects in jail too long” waiting for treatment after being declared incompetent to stand trial. The state previously was sued over this issue in 2012.
	<i>Lakey v. Taylor</i> (rehearing)	July 2014	Texas Court of Appeals upheld a district court ruling that pretrial detainees are entitled, under the Texas constitution, to competency services within a “reasonable amount of time” following a court order into treatment. At the same time, the court reversed a district court finding that wait-listing pretrial detainees until beds become available for competency services does not violate their rights to due process.
Utah	<i>Disability Law Center v. Utah</i>	September 2015	Violation of constitutional rights resulting from holding pretrial detainees in jails for “unconstitutionally excessive periods of time” while they wait for court-ordered competency services
Virginia	<i>Roxane Adams, Jamycheal M. Mitchell v. NAPHCare Inc.</i>	May 2016	Wrongful death and negligence stemming from failure to file necessary competency evaluation paperwork
Washington	<i>Trueblood v. Dept. of Social and Health Services</i>	May 2016	Violation of constitutional rights of pretrial detainees resulting from failure to provide competency evaluation and restoration services in a timely manner

APPENDIX B

Forensic Data Points for IST Bed Capacity Estimation Model

Input data points for the queueing model were obtained and computed from data reported by officials to the Treatment Advocacy Center as described in "Methodology." These data points include the following:

- Average number of days on bed waitlist
- Average number of people on bed waitlist
- Average length of stay for pretrial forensic patients
- Number of people arriving to the system each day determined by the average number of competency evaluation and restoration orders per month
- Number of forensic beds used for pretrial patients computed from the number of forensic beds and the percentage of pretrial forensic patients receiving competency services.

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First as an intern and then as a consultant, the research of Florida A&M University College of Law student Sabah Muhammad into lawsuits and other legal actions surrounding forensic bed waits illuminated the many constitutional issues being raised about forensic bed waits.



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The Treatment Advocacy Center is a national nonprofit organization dedicated exclusively to eliminating barriers to the timely and effective treatment of severe mental illness. The organization promotes laws, policies and practices for the delivery of psychiatric care and supports the development of innovative treatments for and research into the causes of severe and persistent psychiatric illnesses, such as schizophrenia and bipolar disorder.