Determinants of Length of Stay in Utah's Juvenile Secure Care Facilities

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Introduction

The Importance of Length of Stay for Delinquent Youth

Determining how long to keep a juvenile in secure facilities is both an issue of public safety and an issue of reform in which policy and decision-makers must balance the needs of the community with the needs of the delinquent youth (Schubert, 2013; Winokur, Smith, Bontrager, & Blankenship, 2008). The balance between these often competing interests is of paramount importance when one considers the costs of crime on one hand, and the goal of rehabilitation on the other.

Though not specific to juvenile crime, criminal justice literature divides the costs of crime into both tangible and intangible factors (Heaton, 2010). The tangible burdens are economic and are more clearly visible. These include, as examples, adjudication costs, property loss, medical treatment costs and prevention expenses. On the lower end of the cost spectrum, motor-vehicle theft, burglary and larceny crimes range from estimated costs of $2,000 to $13,000 per crime, while violent crimes range from per event costs of $67,000 for robbery to $217,000 for rape and $8.6-million for homicide (see Heaton, 2010 for a review). Intangible costs are more difficult to measure, but can be considerably more crippling, especially at the individual, victim level. The psychological effects of crime, which are often long-lasting, are a primary example of intangible costs, but these also include loss of quality of life and, at the society level, loss of community space (such as removal of parks) in order to prevent crime.

Despite marked decreases in delinquent behavior (National Center for Juvenile Justice, 2014) and the number of youth residential placements (Sickmund, Sladky, Kang, & Puzzanchera, 2013) in the past several years, much of the legislation and policy related to juvenile justice was adopted during a period of disconcerting growth in juvenile crime rates. Trends during the 1980s and 1990s indicated a precipitous rise in the rate of offenses that comprise both the violent crime index[1] and the property crime index[2]. From the 1980 rate of 295 violent crime index offenses per 100,000 youth age 10-17, a zenith was reached in 1994 when the rate extended to 497 per 100,000. Property crime index offenses also rose steadily from 1980 (1,526 per 100,000) to a high in 1988 (2,534 per 100,000), after which it largely plateaued until 1995 (2,383 per 100,000).

In response to an overall rise in juvenile crime in the 1980s, and accompanying critique of the efficacy of the juvenile justice system, juvenile courts responded by adopting policy changes aimed at meeting a face valid assessment of justice (i.e., "get tough" policies; Merlo & Benekos, 2003; Winokur et al., 2008). Of particular interest were lengths of stay (referred to as LOS in the remainder of this document) in juvenile facilities, which were perceived as failing a face valid assessment of proportionality (Fagan, 2008; Loughran et al., 2009). Juvenile confinements were viewed as too ephemeral to affect meaningful reform or to have a deterrent, punitive effect through punishment. The result was adoption of policies imposing longer overall stays (Fagan, 2008). It was also assumed that longer overall stays afforded greater opportunity for reform/rehabilitation; thus, from a prevention perspective, longer stays in juvenile facilities

[1] Includes murder, non-negligent manslaughter, forcible rape, robbery and aggravated assault.
[2] Includes burglary, larceny-theft, motor vehicle theft and arson.

equated both an increased deterrent and an increased reform/rehabilitation affect, as well as meeting retribution and incapacitation demands (Darley, Carlsmith, & Robinson, 2000).

Part of the driving force toward increased punishment and longer confinements was motivated by theories of rational choice, or the idea that criminals choose crime using a cost-benefits perspective in which the benefits of committing the crime are viewed as outweighing potential costs (Cornish & Clarke, 1986). It follows, then, that enhancing the costs would tip the scales in favor of deterrence. In general this theory does not accurately reflect the criminal mindset (Andrews & Bonta, 2010), but when applied to juvenile delinquents in particular, the theory does not account for a general lack of rational or consequential thinking skills among delinquent youth (Bennion, 1986).

Irrespective of future crime deterrence, there are societal incentives for keeping offenders incarcerated, as doing so precludes the ability to commit further crime. As Winokur et al. (2008) stated: "Prisons and jails perform incapacitation better than any other alternative method with the exception[s] of banishment and death" (p. 126). However, the criminal justice community must also consider whether delinquent youth are receiving justice when experiencing lengthy incarceration. For example, mixing youth who are low and moderate-risk levels with youth who are high-risk can increase the likelihood of recidivism among the lower risk youth, thereby increasing the likelihood that they will commit crimes as adults (Lowenkamp & Latessa, 2004).

Recent research has challenged the notion of extended incarceration as a method of deterring further criminal conduct. The Pathways to Desistance Project (a seven-year longitudinal study following juvenile delinquents post-conviction) found that, controlling for other factors including criminal history, youth receiving institutional placements were no less likely to re-offend relative to youth who received probation; moreover, no recidivism reduction benefits were found for longer LOS (Loughran et al., 2009). Other research also supports the conclusion that neither incarceration nor increased LOS translates to reduced recidivism (Fagan, 1995; Fagan, 2008).

To the extent that juvenile incarceration is seen as an opportunity for treatment and rehabilitation, research showing an iatrogenic effect for treatment and incarceration is particularly relevant. Myner, Santman, Cappelletty and Perlmutter (1998) found that longer lengths of stay were associated with an increase in recidivism (rather than a decrease) that was partially attributable to learning from higher risk peers and to a labelling effect that cast youth as offenders. Budeiri (1999; cited in Winokur et al., 2008) indicated that incarceration beyond rehabilitation was associated with difficulties in reintegration to society and created youth who were more dangerous (at-risk) than when entering the system. Gatti, Tremblay, and Vitaro (2009) found that, as juvenile court involvement became more intensive and restrictive (including institutionalization), the likelihood of an extended criminal career into adulthood became more likely. Similarly, Holman and Ziedenburg (2006) found that juvenile detention increased the likelihood of recidivism through several mechanisms, including creating a congregation of antisocial peers, stunting the natural processes by which youth "age out" of delinquency, and providing further impediments to educational attainment among an already low achieving population.

Having reviewed several studies showing inconsistent relationships between LOS and recidivism, Winokur et al. (2008) examined several moderating factors of the relationship. Their research found a general pattern suggesting no relationship between LOS and recidivism for youths in low, moderate and maximum risk residential facilities in Florida when controlling for other factors. However, a subset of youths in high-risk facilities revealed an interesting pattern. Youths receiving treatment in high-risk facilities for between one and four months or 17 to 20 months revealed lower levels of recidivism than youths released after six to 11 months or any period beyond 23 months. The authors suggest that youths released between one and four months were (despite being in a high-risk facility) objectively lower risk and typically younger, which led to quicker releases. However, they suggest that youths in the facility for more moderate stays may have experienced an optimal treatment dosage consistent with Lispey's research (Lipsey, 2009; Lipsey & Wilson, 1998), beyond which detrimental effects occurred. Indeed, Winokur et al. (2008) note that any benefits to additional lengths of stay are likely due to concomitant increases in the level of treatment. Moreover, even within that subset of programs, the authors assert that only facilities adhering to best practices in program effectiveness would be expected to reduce recidivism as a function of longer lengths of stay.

The general finding of a null effect for LOS as a predictor of future recidivism may be an artifact of the methodologies of the studies. When the nature and length of treatment, as well as the target of treatment, are not considered as moderating factors, the net effect of LOS on recidivism may appear null simply because ineffective forms of treatment were employed or because treatment was aimed at lower risk youth (where less change would be expected; Lowenkamp & Latessa, 2004).

With respect to length of treatment, research has suggested a significant effect for optimal (rather than increased) LOS as a predictor of decreased recidivism (Lipsey & Wilson, 1998). Longer stays were found to be more effective when combined with continuous (overlapping) treatment that was closely monitored in terms of integrity to program fidelity. Certain types of treatment, such as cognitive-behavioral approaches, were also regarded as more effective.

The effectiveness of increased LOS on reduced recidivism is also inexorably connected to the risk principle, which simply states that the level of both supervision and treatment should match an offender's level of risk (where risk is determined by established valid assessments). A meta-analytic review by Lowenkamp, Latessa, and Holsinger (2006), for example, indicated that longer lengths of stay were predictive of reduced recidivism, with the caveat that the increased lengths of stay were predictive for higher risk offenders, and only when occurring in conjunction with residential programming, cognitive-behavioral or behavioral programming, and greater levels of services. It is important to consider that the effects of treatment (and hence incarceration) can diminish after an optimal length of time (where optimal treatment length is determined by risk level), and incarceration of low-risk youth is likely to increase criminal behavior, even into adulthood, through multiple mechanisms (Holman & Ziedenburg, 2006)[3].

[3] In addition to the mechanisms outlined by Holman and Ziedenberg (2006) above, Lowenkamp and Latessa (2004) summarize three factors that increase the low-risk offender's likelihood to recidivate based on the profiles of low-risk and high-risk offenders. First, by definition, low-risk offenders have some positive peer and familial prosocial influences. When placed in institutional settings for extended periods of time, we increase their exposure to antisocial peers. Second, low-risk offenders have less antisocial attitudes, but placement in a facility with high-risk

The literature cited above indicates that increased lengths of stay are associated with decreased recidivism only under certain (rather specific) circumstances, which include receiving intensive and evidence-based effective services during the period of incarceration. It is clear that there is a need to weigh and balance societal incapacitation and retribution demands on the one hand, with youth-level rehabilitation and avoidance of greater harm on the other, as juvenile delinquents are qualitatively different from adult offenders. Speaking on this difference, the United States Supreme Court decision in Graham v. Florida (2010) stated:

> As compared to adults, juveniles have a lack of maturity and an underdeveloped sense of responsibility; they are more vulnerable or susceptible to negative influences and outside pressures, including peer pressures; and their characters are not as well formed…Juveniles are more capable of change than are adults, and their actions are less likely to be evidence of irretrievably depraved character than are the actions of adults. It remains true that from a moral standpoint it would be misguided to equate the failings of a minor with those of an adult, for a greater possibility exists that a minor's character deficiencies will be reformed.

To the extent that the goal of criminal justice agencies is rehabilitation and avoidance of greater harm in the juvenile delinquent population, the appropriate LOS for youth is properly defined as the minimum amount required for rehabilitation (which is determined by a myriad of factors that include type, duration and intensity of programming that is matched to a delinquent youth's level of risk). Given that optimal (though largely theoretical) lengths of stay exist, we are left with the question: what determines lengths of stay in practice?

Secure Care LOS/Release Decisions in Utah

The state of Utah employs an indeterminate sentencing structure, which (in contrast to determinate or offense-based systems) bases release decisions on progress toward successful rehabilitation. Once committed to secure care by the Juvenile Court, a youth is under the jurisdiction of the Youth Parole Authority (YPA; discussed below), which sets conditions of placement, requirements for release, conducts progress reviews, and also makes decisions of release (DeWitt & Wells, 2013). The secure care and YPA processes operate with the goal of successful reintegration of the youth back into his or her community, and thus place emphasis on addressing case management identified treatment goals based on factors that place the youth at risk to reoffend.

YPA board members are citizens from across the state of Utah. The board consists of 10 full-time members and five pro tempore members. The YPA is responsible for hearings at the five Utah secure care facilities, including initial hearings at which the expectations during secure confinement are outlined for youths, and guidelines for LOS are established (discussed in more detail below). Over one-third of YPA hearings are progress hearings (35.7%), followed in order of frequency by initial hearings (21.3%), parole review (20.9%), discharge hearings (19.6%),

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youth disrupts their usual network that supports prosocial attitudes. Third, low-risk youth may have certain responsivity factors that make them susceptible to manipulation by "more sophisticated, higher-risk, predatory offenders" (p. 8).

recession hearings (2.1%) and revocation hearings (0.4%; DeWitt & Wells, 2013). Progress hearings are held every six months (occasionally more often), and youth meeting established progress criteria become eligible for a parole hearing. If parole is granted, youth typically receive 90-day trial placements in the community. During trial placements, the YPA can rescind a community placement for violations of the conditions of placement, or if behavior indicates a youth is likely to reoffend or violate conditions. Youths who successfully complete trial placements are paroled, during which they remain under the YPA's authority, and the YPA maintains the authority to revoke parole for violations of conditions. After successfully completing parole, youth YPA and JJS jurisdiction over the youth are terminated.

In order to establish lengths of stay for youths, the YPA follows a guideline matrix that classifies youths based on criminal history and presenting offense(s). Factors considered in criminal history include prior commitments to secure care, total felony convictions, total misdemeanor convictions, life endangering felony convictions, and parole/commitment status (i.e., already on parole or AWOL at the time of commitment). Factors considered for presenting offenses include the nature of the offenses: property or person. Property-related presenting offenses carry shorter guidelines than person offenses, which are classified by the felony degree and whether serious injury to a victim occurred. Homicides are the only offense that carries unstipulated guidelines, and are considered on a case-by-case basis. The average LOS for similar youth committed to secure care in the previous three years is also considered. Guidelines start at a minimum of six months, and extend to 24 months (excluding homicides), though both mitigating and aggravating factors are also considered.

The aggravating and mitigating circumstances portion of the YPA guideline matrix allows YPA members to depart from the typical guidelines. Mitigating factors include mental impairment that reduces culpability, "extraordinary" cooperation with law enforcement, instances in which the victim of the criminal act was the aggressor, and an assessment by YPA board members that the presenting offense was less dangerous than most offenses in the corresponding severity level. Aggravating factors include consideration of the outcome for the victim (death, serious bodily injury or emotional trauma), consideration of the vulnerability of the victim (e.g., a victim who was infirmed or of reduced mental capacity), whether multiple victims were involved, whether a weapon was involved, whether the youth offender has an extensive delinquency history, whether the youth offender was on parole when a new criminal act was committed, and whether the offense was premeditated.

In addition to the historical delinquency factors surrounding a commitment to secure care, the rehabilitative needs of the youth play a crucial role in LOS. At or near the time youth enter secure care, case managers administer a Protection and Risk Assessment (PRA) for the youth. The Utah developed and normed PRA is a Risk, Need, Responsivity (RNR) assessment (Andrews & Bonta, 2010). The RNR principles are the foundation of effective correctional interventions, and, as identified by the PRA, they provide the basis of case planning and treatment/rehabilitation goals for secure care youths.

The risk principle proposes that the likelihood of committing future crimes can be predicted, through risk assessments, and decisions about resource allocation (e.g. programming and treatment) should be based on assessed risk, with high-risk offenders receiving more intensive

services. In a secure care facility, most youth would be high-risk, and thus need more intensive services. To the extent that youth are lower risk, they should not be mixed with high-risk youths. The need principle identifies dynamic criminogenic factors that are amenable to intervention (e.g., attitudes or skills, as opposed to static or unamenable factors, like criminal history). The need principle dictates that corrections-based treatment should be based on assessed need and specifically targeted to dynamic, criminogenic needs: antisocial behavior; antisocial personality pattern; pro-criminal attitudes; social supports for crime; substance abuse; family relationships; education and employment; pro-social recreational opportunities). While the risk and needs portions of the RNR model address the "who" and "what" aspects (respectively) required for successful intervention, the responsivity principle addresses the "how" component (Andrews & Bonta, 2010). The responsivity principle identified cognitive behavioral therapy (CBT) programming as the most effective way to teach new skill and behaviors. Additionally, the responsivity principle proposed that interventions should be tailored to individual characteristics, such as gender, cognitive abilities, or motivation to change.

In the past 20 years, research has demonstrated that criminal justice programs are more effective when operated in accordance with the RNR principles (Andrews & Bonta, 2010; Andrews & Dowden, 2007; Gendreau, Smith, & French, 2006). The majority of meta-analyses of offender treatment literature has shown at least a 15% reduction in recidivism over the control condition when CBT-based responsivity approaches are used (Smith, Gendreau, & Swartz, 2009). With respect to the RNR model as a whole, Andrews and Bonta (2010) analyzed 44 vocational programs and found that programs adhering to all three principles produced a 38 percentage point difference in the recidivism rate between the treatment and comparison groups, while programs adhering to none of the principles produced a five percentage point difference in recidivism.

As the RNR tool for Utah's youth, the PRA generates the risk, need and responsivity factors for a youth-specific case plan. From the list of domains the PRA measures (discussed in more detail below), three to five issues of paramount importance are identified. Within the first few weeks of entering secure care, youth meet with case managers and staff to discuss the treatment goals. Staff meets on a monthly basis to review the case plan and progress. In June of 2013, JJS implemented the Case Planning Tool (CPT) to collect information on treatment progress; however, the criteria for those evaluations are not standardized. Treatment progress data were not available for this cohort (for which data collection ended in June 2013).

A Review of Factors that Predict LOS/Release Decisions

Despite the existence of a structured decision-making tool for LOS in Utah, Juvenile Justice Services' annual report has consistently indicated that actual LOS predominately extends past initial guidelines (DeWitt & Wells, 2013), and, moreover, differs across Utah's five secure care facilities. Given the established importance of limiting incarceration to the minimum amount required to achieve both rehabilitation and public safety goals, it is important to identify factors that relate to extended LOS in Utah and to establish whether those factors are both criminogenic and rehabilitative in nature.

Despite the personal and societal importance of LOS for juveniles, there is a paucity of literature on predictors of lengths of stay in secure facilities. Most research tends to focus on recidivism post-release, and considers LOS only tangentially, as a predictor of recidivism itself (Budeiri, 1999; Fagan, 1995; Fagan, 2008; Loughran et al., 2009; Mallett, Stoddard-Dare, & Seck, 2011; Myner, Santman, Cappelletty, & Perlmutter, 1998; Winokur et al., 2008). The importance of minimizing the LOS experienced by youth in order to avoid iatrogenic effects is minimally discussed (Gatti, Tremblay, & Vitaro, 2009), although we know, from literature cited above, that LOS should be risk and need dependent in the juvenile population, and should also approach the issue from the perspective of minimum required contact necessary to increase the likelihood of rehabilitation and simultaneously meet public safety needs (Loughran, et al., 2009; Mallett, Stoddard-Dare, & Seck, 2011).

Unfortunately, the extant literature predominately considers lengths of stay in detention centers rather than long-term secure care facilities. While factors predicting stays in short-term facilities may prove useful in providing insight into factors that may mitigate or augment lengths of stay in long-term facilities, it is also the case that there are qualitative differences in the types of youths these facilities routinely serve. To augment this line of study, research on decision-making processes in correctional institution settings (whether specific to LOS or not) was also examined in order to account for institutional-level decision processes that might impact LOS at the youth-level.

Mallett, Stoddard-Dare, and Seck (2011) analyzed a cohort of delinquent youth from 2006 to 2008 within one county in a Midwestern state and found eight significant predictors of the number of days in detention, several of which were beyond the youth's control. While being younger at first delinquency adjudication, having committed a person crime, or violating a court order were all significant predictors, external predictors of longer stays included race, a history of mental health concerns, a neglect history, or a history as a victim of physical abuse. These findings suggest that several factors beyond the youth's control (and outside of institutional-control) are relevant to predicting time in detention.

Steiner, Cauffman, and Duxbury (1999) examined personality traits predictive of both criminal behavior and recidivism. Because their study was primarily concerned with reoffending, limited outcomes were presented with respect to LOS, but the authors did indicate that a lack of restraint was positively correlated with LOS; specifically, youths exhibiting poor restraint were more likely to receive punishments while incarcerated, leading to greater LOS. Poole and Regoli (1983), in a study of violence in juvenile institutions, found that youths with more positive attitudes toward aggression and historical records of violence experienced greater LOS. While person crimes would naturally lead to greater periods of incarceration, the additional finding regarding attitudes toward violence (separately from violent behaviors) warrants further examination.

Factors in the youth's correctional environment (i.e., non-youth-level factors) also play an important role in determining LOS and release. Newcomb (1978) suggests a relationship may exist between the number of long-term (or "veteran") youth a facility has and subsequent LOS for other youth. A reciprocal relationship may exist in which the presence of veterans increases facility-wide LOS, and increased LOS facility-wide, in turn, increases the number of veterans.

Bellas and Clements (2004) examined factors predicting LOS in a Vermont detention center. They approached the issue both quantitatively and qualitatively, yielding several interesting findings about system-level factors predicting lengths of stay. Surveys conducted with case managers, supervisors and judges, for example, indicated that their primary consideration in extending LOS was whether they could find an "appropriate, less secure placement" willing to take the youth. Another frequently noted cause of extended stays occurred because of "acting up." Reportedly, youth did not need to commit a new criminal offense, but if their behavior was perceived as uncontrollable in a less secure setting, lengths of stay in detention were often extended.

Research conducted by Reichel (1985) focused on general decision-making in a juvenile facility (e.g., in which unit youths would be housed, from which programs they would most benefit). Findings indicated that staff-based decisions on background expectancies, failed to modify expectancies when contradictory information was presented, and, instead, focused on information that confirmed expectancies. Chein (1976; cited in Reichel, 1985) found that staff perceptions of the purpose of the juvenile justice system, perceptions about the youth (and attributions for why they committed crimes), as well as the backgrounds of staff and decision makers themselves all impacted the treatment of delinquent youth in institutional settings.

Barnes-Ceeney (2013) examined the factors involved in parole decision-making among parole board members and identified five factors that played a role in granting a youth parole. In addition to present offense and delinquency history, Barnes-Ceeney's observation of parole hearings identified gang membership, attendance in education and treatment programs, and institutional infractions as other important determinants. Interestingly, institutional infractions tended to be discussed first and educational and treatment concerns were considered last. The study also indicated that parole board members considered institutional infractions themselves as an indicator of risk, suggesting that failure to conform to rules and norms in the facility predicted a failure to do so in society as well.

Norman (1986) also determined institutional behavior played a key role in parole decisions for youth. Though the study is relatively old, it is particularly pertinent because it examined the discrepancy between the established goals of the YPA in Utah and actual decision-making processes with respect to release decisions. The study found that a great deal of inequity existed at that time for LOS because, while bounded by the nature and severity of their delinquency histories, youths were detained or released largely on the basis of institutional behavior, and secure care staff at the time were reported to use the reporting of institutional behavior to the YPA as a social control tool. Norman concluded that this process favored youth who could "con, manipulate or otherwise appear rehabilitated" (p. 23).

Like Utah, the state of Illinois uses an indeterminate sentencing system based on successful rehabilitation rather than completion of a defined sentence. The Illinois Juvenile Justice Commission Youth Reentry Improvement Report (2011) was highly critical of the process in Illinois, and, while the findings should not be assumed relevant to the state of Utah, the findings warrant consideration in any examination of factors determining LOS in the juvenile population. The Illinois report indicated the release decision process in their state "undermines the

rehabilitation and public safety goals of the Illinois Juvenile Justice System" (p.11). The report found release decisions were primarily based on the frequency of disciplinary violations rather than on objective criteria regarding the best interest of the youth and the public. It also cited a lack of formal procedures for documenting and evaluating treatment progress and the need for further incarceration, with decisions relying instead on informal practices and perceptions of compliance while incarcerated. Other findings from the report that are relevant to the study of LOS include:

(1) Negative behaviors and disciplinary actions typically led to extended stays or delayed presentation to the review board, but positive behaviors did not impact the timing of release ("tickets" issued for inappropriate behaviors were occasionally not criminogenically relevant, such as for talking or swearing, but they did result in delays in parole).
(2) Lack of community placement options sometimes led to delays in receiving parole.
(3) Programming and treatment success were not utilized in a reliable manner as determinants of parole eligibility (which violates the presumptions of an indeterminate sentencing state).
(4) In the absence of formalized markers for rehabilitative success, Parole Review Board (PRB) members "developed an idiosyncratic set of criteria to determine whether a youth ought to be released…these criteria are unpublished and inconsistent" (p. 22).
(5) Youth were often not receiving the services required to achieve rehabilitation.
(6) Parole Review Board members were not trained on issues including adolescent brain development; adolescent trauma; risk, needs and responsivity factors; or evidence-based youth services with the potential to impact dynamic risk factors.

Establishing Factors that Predict LOS/Release Decisions in Utah

It is clear from a review of the extant literature on both LOS specific and general decision-making in juvenile correctional facilities that a complex interaction exists between youth-level factors (e.g., delinquency histories or proclivities), the youth's pre-incarceration environment (e.g., abuse histories), and facility-level factors (e.g., staff attitudes or facility discipline policies), all of which play important roles in determining how youths behave and are treated within facilities. Also, though not all factors that extend LOS are applicable in all jurisdictions, it appears universally true that relatively few factors predict youth-level or system-level factors that lead to rapid rehabilitation that exceeds expectancies and reduces LOS.

From a review of the literature, it is also clear that a gap exists connecting these factors to LOS in secure care facilities specifically. Research from predictors of LOS in detention settings and regarding decision-making processes in general, while potentially informative, may not generalize to long-term secure care settings where, for example, stays are court ordered, and delinquency histories are more extensive. To determine the relevant factors related to LOS in Utah's long-term secure facilities (and factors that might explain differences between facilities), the current research project investigated predictors of LOS from both a quantitative and qualitative perspective. The two methodologies (described below) were intended to supplement one another, as both have inherent limitations on their own.

The research approached the study of LOS in Utah's secure care facilities through qualitative interviews and surveys, and through quantitative, secondary analysis of youth-level variables available in the Court and Agencies' Records Exchange (CARE) system. While the CARE system maintains a great deal of personal level data on delinquent youth, it is limited with respect to system-level factors that also impact LOS, such as the decision-making processes of JJS staff and the YPA. In contrast, a qualitative approach, including both interviews and surveys with JJS staff and YPA members, provides a detailed examination of the processes guiding LOS in application, but offers little with respect to youth-level predictors. Utilization of the two methodologies provides a relatively complete picture (with some limitations discussed below) of the factors that ultimately determine LOS in Utah's secure care facilities.

Quantitative Methods and Results

Methodology

With the help of Juvenile Justice Services (JJS), a dataset was obtained for the population[4] of youth exiting YPA jurisdiction from July 1, 2008 to June 30, 2013. The sample included 747 unique youths, representing 751 secure care episodes (defined below)[5]. The number of episodes exceeds the number of youths because four youths were released from YPA jurisdiction, and then subsequently received new delinquency findings that returned them to secure care after jurisdictional release. Because this happened infrequently, a multilevel model approach (an approach that would address dependencies in the data based on the fact that the same individual contributed to the dataset on more than one occasion) was not viable. Instead, the first episode of secure care was selected and included in subsequent analyses.

Several variables were collected and then either calculated or restructured from their raw form to serve as potential predictors of LOS, the primary dependent variable for the study. The methodologies for calculating or restructuring specific variables considered as predictor variables are described in more detail in the results section along with the variable definitions and properties (e.g., continuous, ordinal, or dichotomous). Reasons for considering variables as predictors are also discussed. Because LOS was the primary dependent variable in the study, the methodology for its calculation and its definition are described first.

LOS was not defined simply as the time lapse (e.g., number of days) between commitment to a secure care facility and exit from a secure care facility because youth can move from one facility to another, either after release and new commitment, or because of extra-legal reasons, such as for safety or programming needs. Likewise, it is not accurate to simply sum the individual time periods spent at each facility because facility stays are not terminated when a youth leaves a facility. Location placements are based on disposition codes, and some of these codes can overlap secure care stays. For example, youth deemed as showing sufficient progress toward rehabilitation are given trial placements in the community. During these trial placements, secure facilities leave a bed reserved for the youth in the event that the YPA rescinds the trial placement (if, for example, the youth goes absent without leave [AWOL] or violates a stipulation of the placement) or if the youth commits a new offense. Because of this complexity, time AWOL or on trial placement must be subtracted to obtain the days actually in secure care.

An additional complexity in analyzing LOS as an outcome is the fact that a return to secure care can occur for reasons other than a new offense and subsequent commitment by the court. Without court involvement, a youth can be returned to secure care while on trial placement or parole. Rescission (from trial placement) or revocation (from parole) occur while the youth is still under YPA authority (i.e., before a termination disposition is given by the YPA), and new commitments can occur either while under YPA authority or once the YPA terminates

[4] Although the entire population was studied, the dataset is referred to as a sample in the rest of the document to highlight the fact that, though a population study within the specific timeframe, the projects seeks to generalize results to all secure care cases (including current), and is thus a sample by that definition.

[5] Individuals receiving a secure care disposition, but who were deported before entering a secure care facility, were not included in the population of interest.

jurisdiction over the youth. Because a return can occur before termination of YPA authority, in order to define LOS, an analytic decision must be made to determine whether the event should be treated as a new stay, or merely another incident within the sphere of events that can occur while under YPA authority.

To provide the most unequivocal outcome variable, LOS was calculated as one continuous event as long as the YPA did not terminate authority over the youth at any point following first secure care commitment. In four cases where termination occurred and the youth received a new commitment, only the first LOS was included for the youth, and subsequent stays were not considered (discussed above; n=4). LOS in this study, therefore, represents the sum number of days (occurring between their secure care disposition and termination of YPA authority) that a youth was physically locked in a secure care facility (summed across facilities and multiple stays).

Results

Youth Demographics. Table 1 shows the demographics of the 747 youth in the study. The vast majority were male (90.6%) and almost half were White (49.8%). The race/ethnicity variable in the table is a blended variable. If a youth was noted as being of Hispanic ethnicity, then, regardless of indicated race, he or she was classified as Hispanic for demographic purposes. Hispanic youth represented the second largest demographic group on the blended race/ethnicity variable (34.9%). The mean age at first secure care episode was 16.8, and the median age was 17.0 (not shown). Delinquency histories for these youth began at a young age. The average age of first arrest for the cohort was 12.8, with a median of 13.0 (not shown).

Table 1: Youth Demographics

	n	%
Sex		
Male	676	90.5
Female	71	9.5
Race/Ethnicity		
American Indian	27	3.6
Asian	9	1.2
Black	39	5.2
Pacific Islander	18	2.4
White	372	49.8
Hispanic	261	34.9
Unknown/Missing	11	2.8

Table 2 shows the year during which youth were released from YPA jurisdiction. While the years 2008 and 2013 appear to have fewer releases, recall that data were extracted by JJS by fiscal year; hence these years represent only six months of the respective years. Keeping this is mind, exits from YPA jurisdiction are relatively consistent by year. The 2013 calendar year was on pace to have more exits than other years, but these data cannot address whether that pace continued. Of complete years, 2012 had the fewest exits, and 2009 had the most.

Table 2: Exit Year

Exit Year	n	%
2008	78	10.4
2009	155	20.7
2010	151	20.2
2011	145	19.4
2012	130	17.4
2013	88	11.8

Secure Facility Representation. Table 3 shows the secure care facility to which youths were first assigned. Values in this table, and for all analyses that follow, do not include cases originally assigned to Farmington Bay Youth Center. The decision was

made to remove these cases because the center no longer houses youths assigned to secure care, and, because the study is examining predictors of LOS as a function of facility, it is not useful to model outcomes for a facility that no longer serves in that capacity. All analyses that follow are, therefore, based on the five secure care units that still operate in that capacity (see Figure 1 for a map of facility locations). Fifteen cases whose first secure care assignment was Farmington Bay were removed by this methodological decision; all cases had secure care start dates prior to 2008. A total of 732 cases were available for further analyses.

As seen in Table 3, Mill Creek housed the largest percentage of youth from the study's cohort, while Southwest housed the fewest. The majority of youth were housed in only one facility (91.0%; not shown) during the course of their stay or stays in secure care; 7.9% were housed in two facilities, and 1.1% were housed in three or more (one youth was housed in all six [including Farmington Bay] facilities at some point during his or her secure confinements). Overall, 275 youths (37.6%) had more than one secure confinement period; 106 had more than two (14.5%); 41 had more than three (5.6%); 16 had more than four (2.2%), and 10 had more than five (1.4%; not shown). The maximum number of secure care stays was eight in one secure care episode (recall that an episode represents the time frame between first secure care start date and termination of jurisdiction by the YPA; multiple stays are, therefore, within an episode).

Table 3: First Secure Facility

Facility	n	%
Mill Creek	285	38.9
Wasatch	141	19.3
Decker Lake	158	21.6
Slate Canyon	113	15.4
Southwest	35	4.8

These outcomes suggest that, although youth commonly returned to secure care (because of rescission, revocation or new conviction), they often returned to the same facility. This fact is important because, to the extent that we wish to attribute LOS to one facility (the first secure care facility), that facility should be responsible for the youth for the vast majority of his or her LOS[6]. Additional analyses were conducted to further examine the issue and the appropriateness of defining the first facility as the reference facility for the entire LOS. The time in the first facility was summed across all stays within that facility, and then divided by the total episode-based LOS. This produces the percentage of the entire LOS episode that was spent within the first facility to which youths were assigned (across all individual stays), and indicated that 94.4% of youths' total episode-based time was spent in the first facility. Though other analytic options exist, treating the first facility as the reference facility for predictive analyses presented later in this document was deemed the best methodological choice (see footnote six for more detail) because of the fact that the vast majority of LOS was accumulated in the first facility.

[6] Because youths change facilities for multiple reasons that do not include new commitments (and new sentences), some youths are merely finishing stays in secure care that were largely fully completed in their first facility. Moreover, the closer a youth is to aging out of the JJS system (at age 21), the less time he or she can actually spend in secure care (creating a ceiling for LOS). For these reasons, stays in second (and higher) facilities are often shorter than stays in the first facility. Approaching the issue from the episode perspective was, therefore, deemed the preferred methodology given the explanation outlined in the body of this document.

Risk and Protection. Youth levels of risk and protection were calculated using Utah's Protective and Risk Assessment (PRA version 1.05). Unfortunately, the PRA has undergone revisions over the last several years, resulting in changes to the wording of the questions that alter the underlying psychometric properties (e.g., time frames for behaviors changed from the last six months to the last three months). While revisions are beneficial for validating the tool, they are problematic from the standpoint of using the item scores, domain scores or total scores as predictors of any outcome because items are not equivalent across the different versions of the PRA. Version 1.05 was selected as the version that would be used in analyses for this study because most youth had version 1.05 of the assessment, but 121 youth (of the youth remaining after case eliminations described above) did not. Thus, for 121 youth, certain items and domain scores are missing in the dataset and total scores cannot be calculated. Domain scores for these youths are only missing for domains that were calculated using items that changed from earlier versions of the assessment to version 1.05. These domains are: use of free time, relationships, environment in which the youth was primarily raised, alcohol and drugs, and attitudes/behaviors. Risk and protection scores below do not reflect scores for 121 youths on these domains. Likewise, total scores for these youths could not be calculated because the individual items that comprise the total scores were not psychometrically identical. Domains with items that did not change across versions of the PRA, and which were therefore unaffected, are: delinquency history, school, employment, current living arrangements, and mental health.

Figure 1: Secure Care Facility Locations

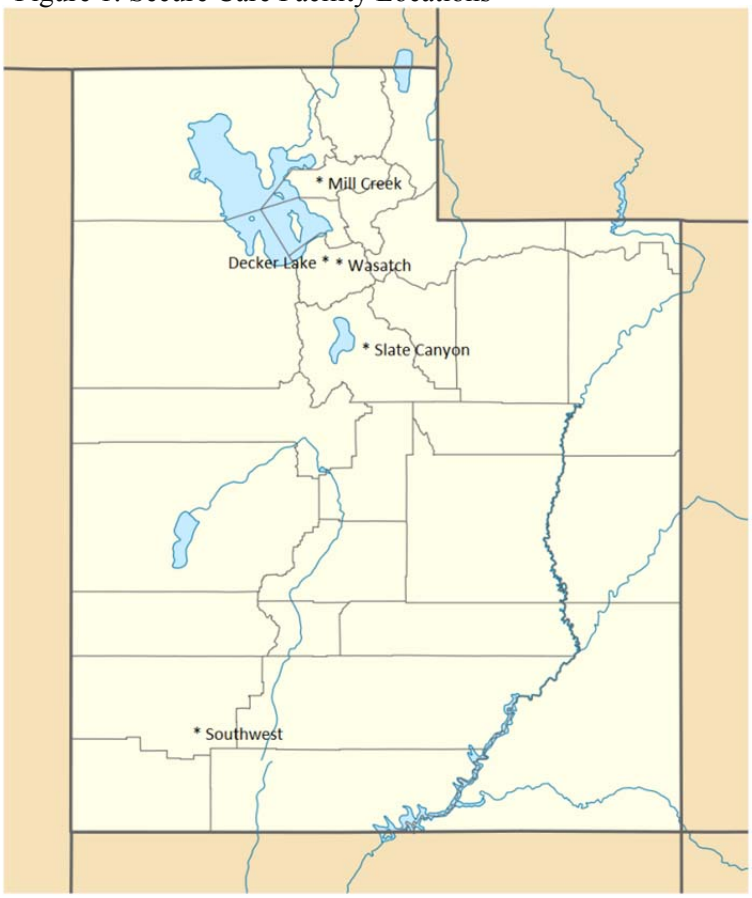

Table 4 shows the number of cases beginning secure care by year. It also shows the number of cases entering by year that were available after the PRA version restriction (i.e., that had version 1.05 of the PRA). Recall that, to be included in the study, a youth had to be released from secure care between 2008 and 2013. The fact that a few youth entered the secure care system in 2003, 2004 or 2005 indicates they were in the system an exceptionally long time. Unfortunately, these are the youth for whom PRA scores were not considered because they occurred before version 1.05 of the PRA. As seen in Table 4, 2007 marked the first year in which version 1.05 was used, and 59.3% of youth received version 1.05 in that year. Almost all youth (97.3%) received version 1.05 in 2008, and all youth received version 1.05 from 2009 to 2013.

PRA domain and total scores were calculated for youth using the assessments closest to their secure care start date as well as the assessment closest to YPA jurisdictional termination. Although the assessments closest to exit were considered in the predictive models in order to examine change over time as a predictor of LOS (change scores were also considered in the models), only the PRAs closet to the start date are summarized in Table 5 in order to provide the reader with a snapshot of the risk and protection factors of secure care youth at the time they began secure confinement. On average, once youth entered secure care, they received a PRA assessment every 141 days between start and termination.

Table 4: Valid PRA Assessments by Secure Care Start Year

Start Year	n in Year	n with 1.05	% with 1.05
2003	1	0	0.0
2004	2	0	0.0
2005	19	0	0.0
2006	40	0	0.0
2007	135	80	59.3
2008	148	144	97.3
2009	124	124	100.0
2010	126	126	100.0
2011	88	88	100.0
2012	48	48	100.0
2013	1	1	100.0

Typically PRA scores have a protective component (represented as a whole number) and a risk component (represented as fractions or decimals). For example, a youth might have a total score of 32.75, which indicates a protective factor score of 32 and a risk score of 75. Because data presented in Table 5 are aggregated across youth, the domain and total scores were parsed into their respective components, and both risk and protective factors are represented as whole numbers. Decimal places, therefore, do not represent the risk component of the score. Note that the delinquency scale does not have a corresponding protective component; this is because all delinquency scale items are risk related (all are also static rather than dynamic). Also, it is important to keep in mind that the number of items differs by domain; hence, scores are not directly comparable across domains (for example, the highest risk score in one domain

Table 5: PRA Domain and Total Scores

Domain	N	Mean	Median	Std. Dev.
Delinquency Risk (30)	732	16.6	17	5.1
School Risk (32)	732	10.0	8	6.6
School Protection (15)	732	3.8	3	3.4
Free Time Risk (1)	611	0.3	0	0.4
Free Time Protection (6)	611	2.3	2	1.8
Employment Risk (3)	732	0.1	0	0.4
Employment Protection (6)	732	1.5	1	1.6
Relationships Risk (12)	611	7.7	9	3.2
Relationships Protection (7)	611	1.6	1	1.6
Environment Risk (13)	611	3.3	3	2.6
Environment Protection (3)	611	1.8	2	1.0
Current Living Risk (26)	732	5.3	4	5.5
Current Living Protection (32)	732	7.2	6	5.5
Alcohol and Drugs Risk (36)	611	10.5	9	8.9
Alcohol and Drugs Protection (2)	611	0.3	0	0.7
Mental Health Risk (11)	732	3.3	2	2.7
Mental Health Protection (9)	732	3.9	4	2.7
Attitudes/Behaviors Risk (24)	611	9.4	9	5.2
Attitudes/Behaviors Protection (22)	611	6.8	6	5.1
Skills Risk (14)	611	9.0	9	2.7
Skills Protection (14)	611	0.8	1	1.3
Total Risk (149)	*611*	*75.6*	*74*	*22.7*
Total Protection (75)	*611*	*32.3*	*30*	*13.8*

may be a relatively moderate risk score in another domain). To aid in interpretation, the maximum score in this cohort by domain is provided in parentheses next to the domain name. The number of youths whose assessments counted toward the total are also provided (N), along with the mean, median and standard deviation (Std. Dev.).

Though a comparison group is not available against which to contrast the PRA results from the secure care cohort, some patterns are notable in Table 5. First, a great deal of variability exists within the cohort. On the delinquency domain, for example, a youth with a score at approximately the 20th percentile of the cohort would have a score 10 points (two standard deviations) lower than a youth in the 80th percentile. The standard deviation for alcohol and drug risk is even larger, and, coupled with the fact that the mean is larger than the median, the large standard deviation suggests that a small percentage of the cohort lies at the very high-risk end of the alcohol and drug risk domain. Similarly high variability relative to the mean can also be seen in other domains, suggesting that the secure care youth are not homogenous with respect to factors that contribute to their risk and protective factors, or even their delinquency histories.

A second notable trend is that, while risk is quite high, protection is generally quite low (though equally variable across youth). An indication of the level of risk relative to protection can be obtained by dividing the mean score by the maximum score. For example, for school risk, the ratio 10.0/32 (31.3%) indicates that the average score is at about 31% of the maximum score. For protection, this ratio is often much lower. Considering school protection, for example, the average score is at 20% of the maximum (3/15). For relationships, the average risk score is at 64% of the maximum, while the average protective score is at only 22% of the maximum. The most notable discrepancy between risk and protection can be seen on the skills domain, where the average risk score is at 64% of the maximum, and the average protective score is at only 6% of the maximum. Exceptions to this pattern can be seen in the protection levels for environment in which the youth were raised, and their mental health protection, both of which are relatively high using the same metric.

Delinquency Histories. Delinquency histories in this section represent histories leading up to first secure care confinement. Subsequent delinquency histories, and their possible predictive contribution to LOS, are discussed in the section on predictive analyses below. To arrive at the categories for delinquent behavior below, 550 statute codes appearing in the data for these youths were recoded into 12 mutually exclusive offense categories shown in Table 6.

Statutes were recoded into offense categories based on charges rather than formal findings of delinquency[7]. Table 6 shows the number and percentage of this cohort of youth (out of N=732) with charges of the specified category and also shows the mean, median, and standard deviation for the total number of pre secure care charges within a category. The total number of charges

[7] While use of charges (whether or not found delinquent) and actual delinquency findings both have pros and cons, it was ultimately decided that charges presented the most accurate representation of these youths' actual behavior. Because these youths had extensive delinquency histories, misrepresenting that history with the inclusion of unsubstantiated charges was considered less of a threat to validity than was the misrepresentation that can occur with use of only delinquency findings due to factors other than innocence (e.g., pleas and diversion efforts) that impact case dispositions. While findings of guilt or innocence are of central importance with respect to dispositions, their meaning is less clear in the current analyses: simply put, the fact that an act was not adjudicated as delinquent does not necessarily indicate that it did not occur in some form.

within a category was calculated such that they are not redundant on any one incident date. Thus, if a youth had more than one charge within a category on the same incident day, it was counted as one charge. If a charge within the same category occurred on two unique incident days, they were counted as two charges. To some extent this methodology underestimates the true number of charges, but also helps attenuate the possibility that charges were "tacked on" or inflated within any one incident.

Because sex offenses were particularly common with the cohort of youths, special consideration was given to coding the general category of sex offenses. For example, while sexual assault is also a person crime, it was coded as a separate category in these data so that it could be examined independent of other person crimes (i.e., in these analyses, sexual assault is mutually exclusive of person crimes). Similarly, non-violent sex offenses were also classified as a separate category to differentiate it from sex offenses that were violent. For example, forcible sexual abuse (regardless of the victim's or perpetrator's age) was classified as a violent sex offense (i.e., sexual assault), while non-violent sexual relations with someone under age 16 (i.e., non-violent sex related status offenses), where the perpetrator was less than 3-years older, were classified as a non-violent sex offense. Status offenses are, therefore, all other types of status offenses.

Table 6: Pre Secure Care Delinquency Histories Based on Charges

Charge Category	n	%	Mean	Median	Std. Dev.
Alcohol or Drug	476	65.0	1.7	1	1.9
DUI	31	4.2	0.6	0	0.2
Person	547	74.7	2.0	1	2.0
Sexual Assault	97	13.3	0.2	0	0.5
Non-Violent Sex Offense	97	13.3	0.1	0	0.3
Property	664	90.7	4.5	4	3.7
Public Order	541	73.9	2.0	1	1.9
Status	490	66.9	1.8	1	2.1
Traffic	192	26.2	0.4	0	0.8
Weapons	239	32.7	0.4	0	0.7
AWOL	30	4.1	0.1	0	0.3
Other	17	2.3	0.0	0	0.2

As seen in Table 6, a large number of crimes were more likely than not to be part of a youth's delinquency history, including alcohol and drug, person, property, status and public order offenses. Nine of every 10 youths had a property offense history pre secure care, and almost three of every four had a person offense. Sexual assault offenses occurred in over one in 10 youths, as did non-violent sex offenses. Only DUIs, AWOL and "other[8]" offenses occurred in less than 5% of youths. With respect to the total number of pre secure care offenses, the average youth had 4.5 property offenses (median=4), and almost two each of person, public order and status offenses. Alcohol and drug offenses were also fairly common at 1.7 per youth.

Table 7 shows the number and percentage representing the most severe charge a youth received pre secure care. As one might expect in this population, charges tended to be quite severe. No youths had charges with a maximum severity corresponding to a class C misdemeanor; only 15

[8] Offenses categorized under "other" include, as examples, parks and recreation violations, wildlife restriction violations, and running away from home.

(2.0%) had a maximum severity charge that was only a class B misdemeanor, and only 61 (8.3%) had a maximum severity charge that was a class A misdemeanor. Almost 90% of the cohort had a felony charge pre secure care, and well over half (65.4%) had an offense severity of second degree felony or above.

Table 7: Severity of Most Severe Pre Secure Care Charge

Severity	n	%
Class C Misdemeanor	0	0.0
Class B Misdemeanor	15	2.0
Class A Misdemeanor	61	8.3
Third Degree Felony	177	24.2
Second Degree Felony	320	43.7
First Degree Felony	159	21.7

Victimization Histories. An appreciation for the victimization histories of these youths was considered to help elucidate potential factors related to the considerable delinquency histories discussed above. Of the 732 youths in this cohort, 11.5% (n=84) were victims of reported abuse, while 5.7% (n=42) were victims of reported neglect. When considering these data, however, it is important to note that victimization histories may not be documented as thoroughly as offense histories, particularly because capturing them partially depends on a third party reporting the victimization and formal charges being filed. Other data suggest that victimization histories may be underreported when considered only through formal charges. For example, though not a direct indicator of victimization, many of these youths had contact with the Division of Child and Family Services (DCFS; n=199, 27.2%), and that contact occurred at a young age (mean=10.8).

YPA Guidelines for Length of Stay. As discussed above, the YPA uses a matrix to calculate a guideline for LOS. The recommended guideline varies as a function of both delinquency history and presenting offense. JJS' annual reports have suggested that youth most often stay longer than the recommended guideline and that finding was confirmed in analyses with this cohort of secure care youths. To examine the issue, when multiple guidelines existed, they were summed for each youth to create the overall YPA guideline (this methodology matched the methodology that summed across secure care stays). Outcomes on that summed variable were then compared to the actual LOS by subtracting the YPA-provided (summed) guideline from actual LOS. Table 8 shows the percentage of youth (in percentile groups) as a function of the difference between actual LOS and the guideline. Positive numbers indicate the actual LOS was longer than the guideline. The average youth's secure care stay exceeded the guideline by 95 days (not shown), and 50% of the youth (seen in Table 8) exceeded the guideline by 52 days. As seen in the table, just less than 30% of the youth had actual lengths of stay that were shorter than the guideline. However, this number likely (perhaps largely) overestimates the percentage of youth who have stays shorter than the guidelines. According to interviews with JJS staff and YPA members, stays shorter than the guideline should only occur rarely. It is likely an artifact of the methodology for calculating the guideline as the sum of all guidelines for a youth. In cases where a subsequent guideline was merely a (restated) continuation of a previous guideline, rather than a new guideline, LOS would appear shorter than the summed guideline due to the redundancy.

Table 8: Percentiles for the Difference Between Actual LOS and the YPA Guideline

Percentile	Days Difference
10	-60
20	-11
30	4
40	21
50 (median)	52
60	85
70	132
80	206
90	318

The correlation (not shown) between the guideline and actual LOS was only .441, indicating that the guideline only explained 19.5% ($.441^2$) of the variance in actual LOS. If the guidelines were closely followed for release decisions, we would expect these values to be closer to 1.0 and 100%, respectively. The fact that they are not closer to these values is not necessarily troubling, however, because several contextual factors influence the results in the direction of longer actual lengths of stay relative to the YPA guidelines[9].

First, as noted earlier, Utah follows an indeterminate sentence structure, meaning that youth must make progress toward rehabilitation goals in order to be released (from both secure care and YPA jurisdiction). To the extent that this does not occur (or is not perceived as occurring), LOS will exceed guidelines (also recall from the literature review that few factors exist to speed progress toward rehabilitation/release, while numerous factors serve to extend LOS). A second factor that would reduce the accuracy of YPA guidelines is the fact that guidelines were rarely updated when new charges occurred. Modified (or updated) guidelines existed for only 12.3% youth, but 26.6% of the youth had post secure care start date charges (these could occur in the facility, while on trial placement, or while on parole). While not all of these charges would result in findings of delinquency, or return to secure care, some charges would result in both outcomes, and would likely extend LOS beyond the initial unmodified guideline. Unfortunately, multiple secure care stays can occur due to new delinquency findings or for other reasons (e.g., transfers); accordingly, these data cannot parse the effect of new delinquency findings on subsequent secure care stays. Together, these findings suggest that there are a multitude of reasons why YPA guidelines would not match actual LOS for youth, and most of these reasons influence LOS to extend beyond the guideline.

Predictive Models for Length of Stay. The primary dependent variable in this study was the length of time between a youth's first secure care start date and the termination of YPA authority. LOS in this study, therefore, represents the sum number of days (occurring between their secure care disposition and termination of YPA authority) that a youth was physically locked in a secure care facility (summed across facilities and multiple stays).

Factors predicting LOS were first examined through bivariate analyses; 192 variables were examined for their strength of association with LOS. It should be noted that examination of bivariate relationships is not a perfect methodology for identifying important predictors of an outcome because it can capitalize on chance, and is subject to overfitting to the specific cases. Moreover, it fails to consider interactions between variables, wherein a main effect may not be present, but the influence of the variable is important when considered at the levels of another

[9] One other factor does not relate to extending LOS relative to the guideline, but does relate to the predictive accuracy of the guideline. YPA guidelines occasionally extended beyond the date at which the youth would reach age 21 (the age at which JJS would no longer have jurisdiction over the youth). For these youth, the guideline was longer than the possible length of stay (these youth are part of the approximately 30% that had YPA guidelines that were longer than actual LOS). This occurred in only a small number of cases (n=25; 3.4%), but when guidelines were corrected for the fact that the original guideline extended beyond the jurisdictional range, the net effect was a slight increase in the mean discrepancy between LOS and the guideline because the discrepancy always overestimated the possible LOS (and did not correct for a jurisdictional ceiling occurring at age 21). Neither the original nor the corrected guidelines were used in the predictive analyses (below), however, and so do not warrant further consideration.

predictor variable (i.e., an interaction). To partially address this inherent methodological concern, variables (or proxies of those variables) identified in the literature review as potential predictors of LOS were given consideration irrespective of their bivariate relationships in the current cohort of youth. Considering theoretical variables irrespective of their bivariate significance also helps reduce (but does not eliminate) suppression effects[10].

Using variables showing high bivariate correlations, as well as theoretical considerations, factors predicting LOS were modeled through hierarchical linear regression. The results of these models are discussed below. It should first be noted that no models could be derived that fit both sexes equally well. Because the predictors of LOS were clearly not sex invariant, an attempt was made to model females separately. Their infrequent representation in these data severely reduced the power associated with predicting LOS for females and derived estimates were highly unstable. Ultimately, a stable model could not be derived for females despite several attempts. Because no model for females is presented in the analyses that follow, a brief discussion of the differences between males and females on several outcomes is provided to allow the reader to examine the reasons a single model could not be applied to both sexes.

Sex differences. Tables 9 (continuous and ordinal outcomes) and 10 (dichotomous outcomes) outline the differences between males and females in the secure care cohort. Differences that are statistically significant between males and females are noted in the table under the "Sig." column. The value ">.05" in this column indicates the difference was not significant. A non-significant result indicates that that the outcome has a greater than 1-in-20 (i.e., >.05) likelihood of occurring due to chance, and any difference in observed means may be spurious at the 1-in-20 level. A significant result indicates the result would be expected to occur due to chance in less than 1-in-20 trials considering the population data, providing some confidence that the observed difference is meaningful (not spurious). A significant result, therefore, is one that is at or below .05 (1/20), while a non-significant result corresponds to a probability value greater than .05.

Tests of significance for continuous outcomes were examined using independent samples t-tests (with the exception of one outcome noted in footnote 11). Part of the reason no model could be derived to predict LOS for males and females equally well is explained by the extremely different LOS outcomes by sex shown in Table 9. Males averaged nearly 150 more days in secure care than females (451 versus 305), and the two groups also showed notably different variability. For example, a male one standard deviation above the mean LOS would be in secure care nearly 700 days (mean plus one standard deviation) compared to 500 for females, and a male one standard deviation below the mean would be in secure care approximately 200 days (mean minus one standard deviation) compared to just over 100 for females. This outcome suggests that different factors (e.g., delinquency histories) may drive LOS for males relative to females. Some of these differences are also observable in the table. Table 9 shows that females

[10] A suppressor variable is a variable that can have a relatively weak association with a dependent variable (e.g., LOS) itself, but can nevertheless be important in the model because it improves the predictive strength of another independent variable or variables that would either be non-significant or only weakly associated with the dependent variable if the suppressor variable were absent. A suppressor variable performs its role by reducing the otherwise larger residuals of another variable. The suppressor variable is often left in a model for this reason, but it is not interpreted because it is not significant itself.

were significantly older than males at the time of their first charge, and also had significantly fewer total charges. The most severe charge was one degree higher for males than for females[11]. The YPA guideline was significantly shorter for females, which is likely the result of the differing delinquency histories between the two groups (discussed next).

Table 9: Sex Differences on Continuous and Ordinal Outcomes

	Males			Females			
Outcome	**N**	**Mean**	**Std. Dev**	**N**	**Mean**	**Std. Dev.**	**Sig.**
LOS	661	451	248.8	71	305	197.9	.000*
YPA Guideline	657	352	205.8	70	274	184.4	.002
Age First Charge	661	12.8	2.3	70	13.4	2.2	.022
Age First SC	661	16.8	1.0	70	17.0	1.0	>.05
Total Charges	661	13.4	7.5	71	10.9	6.2	.002*
Most Severe Charge	661	F2		71	F3		.000
Total PRA Risk	548	75.5	22.6	63	76.4	23.9	>.05
Total PRA Protection	548	32.5	13.8	63	30.5	13.9	>.05

*Significance adjusted for unequal variances

Differences for categorical outcomes related to presence or absence of a specific delinquency and victimization history were examined using logistic regression, which produces outcomes in terms of odds ratios. Odds ratios reflect the change in odds of the outcome resulting from a one-unit change in the predictor; therefore, the interpretation of an odds ratio depends on the scale of the predictor. In these data, the predictor is categorical, so the odds ratio represents the increase (for odds ratios above one) or decrease (for odds ratios below one) in the likelihood of the youth having the specified delinquency history in Table 10 when a person is male rather than female. This interpretation makes more sense with a tangible example, which is provided below when explaining the interpretation of the outcomes.

Table 10: Sex Differences on Categorical Outcomes

Offense/Victimization Category	**% Males**	**% Females**	**Odds Ratio**	**Sig.**
Alcohol or Drug	65.2	63.4	1.08	>.05
DUI	4.4	2.8	1.58	>.05
Person	75.6	66.2	1.59	>.05
Sexual Assault	14.2	4.2	3.76	.027
Non-Violent Sex Offense	14.2	4.2	3.76	.027
Property	90.6	91.5	0.89	>.05
Public Order	73.4	78.9	0.74	>.05
Status	66.1	74.6	.663	>.05
Traffic	27.1	18.3	1.66	>.05
Weapons	34.6	14.1	3.23	.001
AWOL	3.9	5.6	0.69	>.05
Other	2.1	4.2	0.49	>.05
Neglect Victim	10.6	19.7	0.48	.024
Abuse Victim	5.0	12.7	0.36	.011

It should be noted that, if an odds ratio is not significant, the value of that odds ratio is somewhat spurious. An odds ratio of 1.0 indicates no effect, and when an odds ratio is not significant, the confidence interval surrounding the odds ratio will include 1.0. No matter the size of a non-significant odds ratio, it should not be interpreted as meaningful. Where odds ratios are below

[11] This outcome was examined using ordinal regression; values corresponding to the ordinal categories are presented, as means have no value in interpretation of ordinal outcomes because a mean between categories (e.g., 4.3) cannot actually occur.

one in the table, the relevant predictor is associated with a reduced likelihood of having the specific delinquency/victimization history given that the youth is male rather than female. When the odds ratio is below one, the decrease can be more easily interpreted as the reciprocal of the odds ratio (expressed as 1/X), in which case it is interpreted as an increase in the likelihood of having the history when the youth is female rather than male (discussed more tangibly below).

Examining Table 10, one can see that the percentage of males with a sexual assault charge is significantly higher than for females (14.2% versus 4.2%). The odds ratio associated with this outcome indicates that males are 3.8 times more likely to have a sexual assault charge. They are also 3.8 times more likely to have a non-violent sex offense charge, and are 3.2 times more likely to have a weapons charge. Other offense type categories did not differ between the two groups. With respect to victimization history, females are 2.1 (1/.48) times more likely to be a victim of neglect, and 2.8 (1/.36) times more likely to be a victim of abuse.

Combined with the outcomes from Table 9, one can see secure care females have several notable differences from secure care males. They are older at first charge, have fewer total charges, and are charged, on average, with offenses one degree below males in severity. They have relatively fewer sexual assault charges, non-violent sex offense charges, and are significantly less likely to have a weapons charge. They are also more likely to be victims of both abuse and neglect[12].

Modeling LOS for males. From the 192 variables initially considered as potential predictors of LOS, 16 variables were selected to model the outcome based on their theoretical and statistical importance. Five variables were included in a preliminary model on a purely theoretical basis; four on a theoretical and statistical basis (based on analysis of bivariate outcomes), and seven on a purely statistical basis. The list of variables included in the preliminary model for males is provided in Table 11 by variable category. Variables included on a purely theoretical basis are denoted with a (T), while variables included on a purely statistical basis are denoted with an (S). Variables included for both reasons are marked (ST), for statistical and theoretical. A (T) designation indicates the variable was not a significant predictor in bivariate analyses, but was included based on theoretical consideration of the factors predicting LOS as discussed in the review of extant literature on LOS in detention centers and institutional decision-making factors that were related to LOS.

It is important to note that some very important variables known to be related to LOS (based on literature review as well as interviews and surveys with Utah's secure care staff; discussed in the qualitative section of the report) could not be included in the models because they were not available in the CARE system. Primary among these were treatment progress notes and scores, institutional behavior, and staff attitudes. As mentioned previously, in June of 2013, JJS began to collect information on treatment progress, but those data were not available for the cohort in this study (for which data collection ended in June 2013). Literature (reviewed above) also highlights institutional behavior as a key determinant of LOS, but these data too were not available in the CARE system. As a further result of using archival data, staff attitudes and perceptions regarding

[12] Though data cannot specifically address the issue, staff interviews indicated a perception that judges send girls to secure care irrespective of their offense histories in order to "protect them" from negative home environments and because of a lack of placement options for females.

the purpose of secure care (e.g., whether it is perceived as primarily rehabilitative or punitive) were also not available to model LOS.

To the extent that these are known predictors of LOS, failure to model them limits the interpretation of the models. It is likely the case that inclusion of these unmeasured variables would reduce the significance of other variables, and that a model with these variables would reveal better overall model fit. Of course, this assumption is presently untestable, but is grounded in theory. Accordingly, the predictive model should be evaluated with these caveats in mind, considering the fact that the importance of predictors would likely change in a more robust model.

The initial model building process indicated six variables from Table 11 did not add substantively to prediction of LOS when considered in conjunction with other possible predictors; these variables (history of violence, victim of neglect, victim of abuse, both PRA mental health domain scores and PRA total risk change) were removed from the modeling process. Two other variables (history including alcohol or drug offenses and history including sexual assault or rape offenses) added only marginally to the preliminary model, but were kept as control variables (i.e., to control for delinquency history; discussed more below).

Table 11: Variables Included in a Preliminary Model of LOS for Males

Demographic
Secure Care Facility (ST)
Age at First Charge (ST)
Delinquency History
Yes/No History of Violent Offenses (ST)
Yes/No Person Offense Pre Secure Care Start (T)
Yes/No Sexual Assault Offense Pre Secure Care Start (S)
Yes/No Non-Violent Sex Offense Pre Secure Care Start (S)
Yes/No Alcohol or Drug Offense Pre Secure Care Start (S)
Most Severe Offense Pre Secure Care Start (S)
Yes/No Person Offense Post Secure Care Start (S)
Yes/No Any Offense Post Secure Care Start (S)
Victimization History
Victim of Neglect Pre Secure Care Start (T)
Victim of Abuse Pre Secure Care Start (T)
PRA
PRA Attitudes and Behaviors Risk Score Pre Secure Care (T)
PRA Mental Health Risk Score Pre Secure Care (ST)
PRA Mental Health Protection Score Pre Secure Care (T)
PRA Total Risk Change From Start to Termination (S)

The hierarchical model presented in Table 12 (on page 26) was built using the 10 remaining variables; the variables were entered in three successive regression steps. The column labeled "b" provides the unstandardized regression coefficient. In the case of continuous variables (such as age at first charge) and ordinal variables (such as offense class), the coefficients represent the increase or decrease in LOS that occurs with a one unit change in the predictor (e.g., a one unit increase in age or offense severity). For categorical outcomes, the coefficient represents the increase or decrease in LOS with a change in category (e.g., no sex offense versus a sex offense). These values are significant if the confidence intervals surrounding them do not include the value of zero. When zero is included in the confidence interval, it cannot be said that there is any effect for the variable regardless of the size of the unstandardized beta coefficient[13]. One variable can

[13] An exception to this general rule can occur in bootstrapped confidence intervals that are very close to 0; because of the adjustment for bias that occurs in bootstrapping, in rare circumstances, a confidence interval will include 0 but will still be significant. This does occur in these data.

have a larger beta coefficient than another, but the former is not statistically meaningful if the value is not significantly different from zero.

Step one. One of the principle questions of research interest at this study's inception was whether there were significant differences in LOS between facilities. Therefore, the first model examined differences in LOS as a function of facility only (i.e., as the only predictor). In the model presented in Step 1 of Table 12, the unstandardized coefficient for the constant represents the mean LOS for youth in the Southwest facility (the regression procedure compares all other categories of a variable [i.e., facilities] to one reference category, which, in this model, is Southwest). Outcomes in the column labeled "Sig." denote the significance of the regression based comparisons of Southwest (as the reference category) to each of the other facilities. For the four other facilities, the beta coefficient ("b") represents the number of days by which the specific facility differs from Southwest. For example, analyses indicate that youth at Decker Lake, on average and without accounting for other predictors of LOS, have lengths of stay that are 82.5 days less than Southwest. This was the only significant difference with Southwest as the reference category. Outcomes for other facilities as reference categories are discussed in the Pairwise Comparisons table (Table 13 on page 28)[14].

In this first step, the model indicated facility was a significant predictor of LOS, but facility alone explained only 1.8% of the variance in LOS. This indicates that 98.2% of the variance remained unexplained.

Step two. Step 2 of the modeling procedure added the seven remaining (i.e., not previously eliminated) variables from Table 11 that were available pre secure care start. The variables were entered in the model along with facility in order to (1) determine whether differences in LOS by facility occurred due to differences in the youths they housed, and (2) to identify other factors that predict LOS. Prior to running the full model, continuous variables were centered (mean subtraction) for males so that the predictor would have a meaningful zero point in the regression analyses. For the ordinal variable most severe charge pre secure care, a third degree felony severity charge (the middle charge of those occurring in the data) was set to zero. Post start variables were not added to the model in this step because the modeling process sought to first identify the factors that predict LOS that could be known at the time LOS was defined by the YPA.

Several variables in Step 2 were predictive of LOS. Being older at the time of first charge was predictive of significantly shorter LOS (13.5 days less for every one year increase in age). This finding is partly driven by the fact that, the older a youth is when entering secure care, the less time he or she can spend under JJS jurisdiction. Having a person charge was associated with a significant increase of 40.9 days for LOS, and having an alcohol or drug (AOD) charge was associated with a significant *decrease* in LOS of 52.7 days. Each one unit increase in crime class severity predicted a significant increase in LOS of 33.1 days, and each one-point increase in risk (on a 0 to 24 scale) on the PRA attitudes and behaviors domain predicted 4.7 additional days in LOS. In the Step 2 model, having a sexual assault or rape charge, or a non-violent sex offense charge were not significant predictors of greater LOS despite the coefficients. As mentioned, this

[14] S.E. b represents the bootstrapped (1,000 samples) standard error of the coefficient, and may be of interest to readers wishing to calculate the test statistic.

occurs because the confidence intervals surrounding the coefficient contain the value zero (indicating great variability in the LOS of youths with these delinquency histories).

As in the Step 1 model, the Step 2 model indicated the Southwest facility was associated with significantly longer lengths of stay than Decker Lake, but not relative to other facilities. One difference, however, is that these analyses control for pre-existing differences in the histories of youth. The fact that the significant difference still exists after accounting for other variables in youths' histories indicates that some unaccounted for factors are causing the greater LOS. As we will see shortly, the differential outcome is not unique to Southwest (differences between other facilities are examined in the Pairwise Comparisons of Table 13). One possible factor that could drive the outcome is offenses committed after start of secure care (e.g., during trial placements or parole). Step 3, therefore, adds offenses that occurred post secure care start, and that were related to LOS in bivariate relationships.

Overall, the Step 2 model revealed significant improvement over the model considering only facility as a predictor of LOS. The new model explained 13.6% of the variance in LOS, an improvement of 11.7%. This model is the best model for predicting LOS at secure care start because it contains only variables that are known at the time the YPA establishes the guidelines. To some extent, it also shows agreement with the way the guidelines are formulated. Person and crimes of greater severity lead to longer LOS, while alcohol or drug charges lead to lower LOS. However, it also elucidates the importance of another factor that is not part of the regular LOS guidelines, but that, nevertheless, is predictive of LOS. Based on the attitudes and behaviors risk score from the PRA, youths who do not take responsibility for their antisocial behaviors, who do not show empathy or remorse, who do not respect authority or the law, who are prone to aggression and frustration, and who do not perceive having control over their actions have longer lengths of stay when all other factors are held constant (such as delinquency histories).

Step three. Though recidivism was not an outcome of interest in this study, the relationship between it and LOS warranted examination, as lengths of stay (especially those that are discrepant from guidelines) may be driven by new offenses. In Step 3, two post secure care start variables from Table 11 were added as predictors of LOS: a person offense post secure care start and any offense post secure care start (the two are not mutually exclusive, as person offenses are a subset of any offense).

In the model considering post secure care offenses, both any offense and person offenses post secure care were significant predictors of greater LOS, predicting 102.7 and 65.0 additional days LOS, respectively. Being older at first charge was again associated with a reduced LOS; greater severity of the most severe pre secure care offense, and greater risk on the PRA attitudes and behaviors domain score were both associated with increased LOS. Having an alcohol or drug offense pre secure care or a person offense pre secure care were no longer significant predictors. Having a non-violent sex offense, which was not significant previously, was a significant predictor of greater LOS in the Step 3 model. With respect to facility, controlling for pre secure care and post secure care factors, youth at the Southwest facility had significantly greater lengths of stay than either Slate Canyon or Decker Lake.

The third model produced significant improvement over the model from Step 2, explaining 19.8% of the variance in LOS (an improvement of 6.2%). This suggests that new offenses are part of the reason LOS extends beyond initial guidelines. As mentioned previously, guidelines are sometimes (but not always) updated when a youth is recommitted to secure care; when guidelines are not revised, and the youth is simply recommitted under the old guidelines, discrepancies will be expected to occur.

Table 12:Baseline LOS by Facility

Variable	b	S.E. b*	Sig.	Lower C.I.	Upper C.I.
Step 1 (Facility Differences)					
Southwest (Constant)	453.3	32.9			
Mill Creek	-12.8	36.7	>.05	-87.1	52.8
Wasatch	1.2	40.4	>.05	-75.6	78.2
Decker Lake	-82.5	35.9	.024	-156.4	-13.3
Slate Canyon	-61.3	38.2	>.05	-136.8	13.0
Step 2 (Add Pre Secure Care Variables)					
Southwest (Constant)	434.5	41.3			
Mill Creek	-31.1	35.1	>.05	-102.0	36.0
Wasatch	-48.8	37.6	>.05	-123.8	25.4
Decker Lake	-81.6	34.6	.011	-152.4	-15.8
Slate Canyon	-59.8	35.9	>.05	-135.1	5.8
Age of First Charge	-13.5	3.6	.001	-20.9	-6.7
Person Offense Pre	40.9	20.4	.043	-0.5	77.7
Sexual Assault Offense Pre	53.4	29.7	>.05	-4.7	110.6
Non-Violent Sex Offense Pre	61.6	36.9	>.05	-6.0	136.1
Alcohol or Drug Offense Pre	-52.7	20.9	.015	-94.0	-11.2
Most Severe Offense Pre	33.1	9.2	.002	15.5	51.3
PRA Attitudes and Behaviors Risk Score Pre	4.8	1.6	.004	1.8	7.7
Step 3 (Add Post Secure Care Variables)					
Southwest (Constant)	404.8	38.7			
Mill Creek	-41.6	32.6	>.05	-105.5	21.1
Wasatch	-56.1	35.2	>.05	-123.0	13.8
Decker Lake	-96.6	31.7	.002	-159.1	-35.8
Slate Canyon	-91.0	34.0	.007	-159.2	-27.4
Age of First Charge	-9.7	3.5	.006	-16.8	-3.3
Person Offense Pre	39.3	19.8	>.05	-1.7	75.6
Sexual Assault Offense Pre	56.6	29.6	>.05	-2.9	113.6
Non-Violent Sex Offense Pre	87.5	36.9	.020	18.3	161.4
Alcohol or Drug Offense Pre	-38.4	20.7	>.05	-80.4	2.7
Most Severe Offense Pre	36.6	8.6	.001	20.9	54.5
PRA Attitudes and Behaviors Risk Score Pre	3.2	1.5	.035	0.3	6.3
Person Offense Post	102.7	33.4	.005	41.3	170.1
Any Offense Post	65.0	22.4	.005	15.8	107.4

*Standard errors and confidence intervals are bootstrapped at 1,000 samples

With the model explaining only 19.8% of the variance in LOS, 80.2% remains unexplained. A review of the literature, as well as information gathered from surveys and interviews with JJS staff, suggest several factors not available in the CARE data for this cohort are crucial determinants of LOS. These include youth treatment progress, institutional behavior and

discipline, and facility-level factors outside of the control of youths, such as staff attitudes regarding the purpose of secure care (e.g., rehabilitative or punitive). While the importance of these factors could not be assessed from archival data, surveys and interviews (discussed in the qualitative section) will help define and explain their additional importance.

Step based pairwise comparisons. The regression analyses above only allowed for facility based comparisons relative to one reference group. Although Southwest was chosen, any facility could have served as the reference group. This approach is limited in its utility because facility level differences in LOS between other facilities cannot be analyzed. In order to determine whether other facilities showed differences in LOS, pairwise comparisons of facilities were also conducted separately. These analyses compared each facility to every other facility on LOS (comparisons involving Southwest are merely repeated from the information above)[15].

Pairwise comparisons for facilities are presented in Table 13 for each of the three models discussed above. Values for the mean differences in LOS by facility are presented overall for Step 1 and at the mean/median of the covariates for Steps 2 and 3 (recall that Step 1 has no covariates)[16]. Mean differences are presented as reference facility minus comparison facility (i.e., comparison subtracted from reference).

For Step 1 (which presents the baseline mean differences for LOS without controlling for other factors), Wasatch was the facility with the longest average LOS across the study period (this can be seen by the fact that all values in the table for Wasatch under Step 1 are positive when Wasatch is the reference category, and negative when it is the comparison category). Wasatch had significantly longer lengths of stay than Decker Lake and Slate Canyon, but not Mill Creek or Southwest. As previously discussed, for baseline LOS, Southwest had the second longest LOS, but was significantly longer than only Decker Lake. Mill Creek's LOS was also significantly longer than Decker Lake. No other mean differences were significant at baseline.

The model for Step 2 added pre secure care variables as predictors of LOS. The mean differences reflect the differences in LOS controlling for these variables. In other words, the values adjust for the fact that the facilities did not have the same type of youth, a factor which could alter LOS. Controlling for youth factors and delinquency history, most of the differences in LOS as a result of facility disappeared. Southwest became the facility with the longest LOS (all values with Southwest as the comparison are negative), but Southwest only differed significantly from Decker Lake. The only other significant difference was between Mill Creek and Decker Lake, with Mill Creek having a significantly longer LOS.

The model for Step 3 added post secure care start offenses to the pre secure care variables of Step 2. Controlling for youth factors and delinquency history pre and post secure care start,

[15] Comparisons are made using Least Squared Difference, equivalent to no correction for Type I error.

[16] Fixing covariates to be constant at their mean/median values is a largely arbitrary decision, as they could have been presented at varying levels of the covariates. As long as covariates are all held constant (whether at their mean or some other value), the difference between the means of the facilities will remain the same. For this reason, the means themselves are not presented (as they depend on the specific level at which the covariates were fixed), and, instead, attention is placed on the difference between the means controlling for other factors, such as delinquency history.

Southwest was again the facility with the longest LOS (all values with Southwest as the comparison are negative). Southwest's LOS was significantly longer than both Slate Canyon and Decker Lake. Mill Creek's LOS was significantly longer than Decker Lake's.

In the models controlling for youth factors and delinquency histories (whether pre secure care start only or pre and post secure care), three clusters emerge for LOS. Decker Lake and Slate Canyon (cluster 1) have consistently shorter lengths of stay than Mill Creek and Wasatch (cluster 2), which, in turn, have shorter (though non-significant) lengths of stay than Southwest (cluster 3). When interpreting these results, the readers should keep two very important caveats in mind. First, the models do not allow one to place a value judgment on LOS at the facilities; they cannot argue whether one facility's LOS is more appropriate than another. Second, the models do not control for all differences that are related to LOS. As previously noted, factors such as youth treatment progress, institutional behaviors and facility staff attitudes were not able to be modeled (over 80% of the variance in LOS remained unexplained by the models). Differences between youth and staff on these and other factors may explain the differences in LOS by facility. Alternatively, it is also possible that, even considering these and other factors, differences in LOS may persist (to the extent that they are related to other, unconsidered factors).

Table 13:Pairwise Comparisons of Facility LOS by Model Step

Reference Facility	Comparison	Mean Difference	Sig.
Step 1			
Mill Creek	Wasatch	-13.9	>.05
	Decker Lake	69.7	.003
	Slate Canyon	48.5	>.05
	Southwest	-12.8	>.05
Wasatch	Decker Lake	83.6	.003
	Slate Canyon	62.4	.031
	Southwest	1.2	>.05
Decker Lake	Slate Canyon	-21.2	>.05
	Southwest	-82.5	.024
Slate Canyon	Southwest	-61.3	>.05
Step 2 (With Pre Secure Care Variables)			
Mill Creek	Wasatch	17.7	>.05
	Decker Lake	50.6	.015
	Slate Canyon	28.7	>.05
	Southwest	-31.1	>.05
Wasatch	Decker Lake	32.8	>.05
	Slate Canyon	11.0	>.05
	Southwest	-48.8	>.05
Decker Lake	Slate Canyon	-21.9	>.05
	Southwest	-81.6	.011
Slate Canyon	Southwest	-59.8	>.05
Step 3 (With Pre and Post Secure Care Variables)			
Mill Creek	Wasatch	14.5	>.05
	Decker Lake	55.0	.005
	Slate Canyon	49.4	>.05
	Southwest	-41.6	>.05
Wasatch	Decker Lake	40.6	>.05
	Slate Canyon	34.9	>.05
	Southwest	-56.1	>.05
Decker Lake	Slate Canyon	-5.7	>.05
	Southwest	-96.6	.002
Slate Canyon	Southwest	-91.0	.007

Qualitative Methodology and Results

Methodology

Surveys. Survey questions were designed to assess JJS staff's perception of the decision-making processes with respect to youths' release from secure facilities. The questions focused on five decision points that were assumed to have possible impacts on LOS: setting youths' initial guideline; creating youths' treatment plan; assessing youths' progress on the treatment plan; deciding to parole youth; and deciding to return youth to secure care. Approval for the questions was obtained from the Director of the Division of Juvenile Justice Services and both the Utah Department of Human Services and University of Utah Institutional Review Boards. The survey was converted to an online format to facilitate distribution. A link to the survey, along with an email explaining the purpose of the survey, was sent to 138 staff: 83 working in case management (63 case managers/parole officers and 20 supervisors/administrators) and 55 working at long-term secure facilities (35 counselors III, 15 supervisors of counselors III, and 5 facility administrators). Seventy-six surveys were completed, for a response rate of 55%.

More than half (61%) of surveys were completed by case management staff (representing 55% of all case management staff who received the survey), with the majority of those being completed by case managers (see Table 14). A similar proportion of secure facility staff (55%) completed the survey, with the majority of surveys completed by supervisors or administrators. Surveys were completed by staff from each of the five secure facilities and 9 of the 10 case management regions.

Table 14: Survey Respondents

Respondents	*N*	*%*
Case management staff	46	61
Case managers/Parole officers	32	42
Supervisors/Administrators	14	19
Secure Facility staff*	30	39
Counselors III	14	18
Supervisors/Administrators	16	21
TOTAL	76	100

* Due to administrative oversight, the counselors from one facility did not receive the email to participate in the survey; however, staff from that facility did participate in the interviews.

Approximately two-thirds (61%) of respondents were female. Forty-two percent indicated that a bachelor's degree was the highest level of education they had completed and almost one-third (30%) indicated that a master's degree was the highest level of education they had completed. Overwhelmingly, respondents' major area of study was in social and behavioral sciences (85%). The majority (90%) of respondents had worked for Juvenile Justice Services (JJS) for more than ten years. Almost half (47%) had been in their current position for more than five years, while a similar proportion (45%) had been in their current position for less than three years. Secure facility staff had worked in an average of three prior JJS locations, most commonly in a different secure care facility (see Table 15). Case management staff had worked in an average of four prior JJS locations, most commonly in a detention center.

Interviews. Interview questions were designed to enhance researchers' understanding of survey responses with respect to the decision-making processes surrounding youths' release from long-term secure facilities. Once again, approval for the questions was obtained from the Director of

the Division of Juvenile Justice Services and the Utah Department of Human Services and University of Utah Institutional Review Boards. The consent form, wherein respondents were asked if they were willing to be contacted for the study, was converted to an online format to facilitate distribution. A link to the consent document, along with an email explaining the purpose of the interview, was sent to 14 members of the YPA. Nine YPA members were interviewed, for a response rate of 64%. A similar online consent form was sent to a representative sample of secure facility staff, asking if they would participate in an interview. In all, 26 secure facility staff received the online consent form (18 counselors III and 9 supervisors), with both supervisors and counselors from each facility receiving the invitation. Thirteen staff members, representing all five facilities, were interviewed for a response rate of 50%.

Table 15. Previous Work Experience within JJS

	CM	***SF***
Total N	*44*	*30*
Percent who previously worked in (%):		
Case management	43[1]	27
Community programs	48	30
Detention center	80	40
Diversion	48	20
Long-term secure facility	46	60[2]
Observation and assessment	46	30
Receiving center	41	23
Work camp	7	20

[1]Indicates the individual previously worked in a different case management office from where s/he is currently working.
[2] Indicates the individual previously worked in a different secure facility from where s/he is currently working.

Results

Perception of Factors Influencing Length of the Initial Guideline. Youth are committed to secure facilities, by the Juvenile Court, for an indeterminate sentence. The initial guideline, or recommended LOS, is set by the Youth Parole Authority (YPA) at an Initial Hearing, which takes place after the youth has been in the secure facility for 4-6 weeks. Prior to the hearing, the Hearing Officer (a JJS staff member) calculates a recommended guideline—in the form of a range of months (factors considered when setting the LOS guideline were discussed above). As mentioned, the recommended guideline can be adjusted by the YPA based on the presence of mitigating or aggravating factors with respect to the presenting offense or the youth's delinquency history. Several YPA members indicated that the calculated guideline helped to ensure that the process for determining how long youth should stay in a secure placement was fair and, in the words of one respondent, "not guided by emotion." None of the YPA members interviewed could think of an example where a guideline was shortened (or mitigated) during an initial hearing, although several identified instances where a guideline was set on the short end (e.g., at 10 months on a guideline of 10-12 months). Most commonly, YPA members said that this happened in cases where staff reported that the youth had been making progress on treatment goals in the facility prior to the Initial Hearing. Several YPA members indicated, however, that they were more likely to hold the youth's time in the facility in abeyance as a means of incentivizing treatment participation: letting the youth know that, if he or she continued to do well, he or she would get credit for time served.

The aggravating factors for which the board can extend the guideline are related to the presenting offense: death or serious injury to the victim; possession of a weapon; vulnerability of victim; multiple victims; offense occurred within 120 days after release on parole; and premeditation. The YPA may also extend the guideline, for factors not related to the presenting offense, if the

youth has a conviction record that is 70% above the mean number of convictions of the secure facility population statewide. YPA members can also extend the guideline at their discretion for "other" reasons. When explicitly asked, none of the YPA members interviewed could identify a case where a guideline was extended for "other" reasons. In response to a separate question, however, a small portion of YPA respondents indicated that youth get longer guidelines for reasons that are not in the list of aggravating factors, including: gang membership, use of drugs, attitude in the hearing, and behavior in the facility prior to the hearing. Similarly, a small portion of staff also endorsed the belief that youth get longer, or aggravated, guidelines for "other" reasons, most commonly gang affiliation, substance use, or self-harm. These discrepancies suggest a possible misperception on the part of YPA members as to what offenses are specifically aggravated, and a conflation of (i.e., unintentionally combining as one concept) offense characteristics that JJS identifies as more serious and those characteristics that a YPA member might personally believe are more serious.

Rather than formally aggravate or mitigate a guideline, the majority of YPA members indicated that they would give youth credit for time in the facility prior to the hearing (4-6 weeks for most youth), as a way to shorten the guideline, or not give credit for that time, as a means of extending the guideline. Because the guidelines are a range (e.g., 6-8 months), YPA members also indicated that they would set the guideline at the back end to lengthen a sentence. For the most part, YPA members indicated that youth received a longer guideline based on the recommendation of facility staff.

Most commonly, staff identified factors related to the aggravating guidelines as the primary determination of LOS at the initial hearing (see Table 16). Less frequently, staff identified the youth's attitude during the hearing (e.g., lack of remorse for the offense, no indication of victim empathy, sense of entitlement) as a factor for which the board might set a longer guideline. During interviews, several YPA members indicated most factors that influence the length of the guideline are available in the report that YPA receives and are not a product of youths' attitudes and behaviors during the hearing; however, based on youths' attitude in the hearing, they may set the guideline at the far end (e.g., 12 months on a recommended guideline of 10-12 months) rather than actually aggravating it beyond the calculated range. The YPA guideline is heavily influenced by staff recommendations, which are developed prior to the hearing. As such, staffs' perception that youths' attitude during the hearing is influential might actually reflect staffs' feelings about the youth's attitude in the facility (e.g., because a youth has not expressed remorse while in the facility) as codified in the recommendation rather than the YPA's independent assessment of the youth's attitude. Staff also identified youth's experience in the facility prior to the hearing—in terms of engaging with or progressing on treatment goals (19%) and following facility rules (24%)—as factors that influence the length of the guideline.

Table 16. Factors Contributing to Longer Guidelines at Initial Hearing

	CM	***SF***	***Total***
Total N	*38*	*25*	*63*
Percent who endorsed (%):			
Aggravated guideline	50	72	57
Attitude	16	16	16
Behavior	26	20	24
Calculated guideline	34	16	27
Treatment	18	20	19
Other	26	36	30

Nearly one-third (33%) of staff identified factors associated with longer initial guidelines that are not related to the matrix or aggravating characteristics, such as: attitude during the hearing, behavior in the facility, or progress and engagement with treatment. These include youth with certain types of problems (e.g., substance abuse or mental health concerns) or youth who commit certain types of crimes (e.g., sex offenses). While the commission of certain types of crimes is not unrelated to the matrix (for instance, person crimes result in a longer recommended guideline), the matrix itself does not treat sex offenses differently from other person crimes, nor does the list of possible aggravating factors include sex crimes. Staff at one facility surmised that sex offenders get longer guidelines because victims frequently attend those hearings, which can result in an aggravated or longer guideline[17]. Staff at other facilities also indicated that the presence of a victim at the Initial Hearing (for any type of offense) can result in a longer initial guideline.

All YPA members said that youth must serve the minimum guideline before they are eligible for parole. While this sentiment was also endorsed in the majority of staff surveys and interviews, a percent of staff at three of the facilities indicated a shift towards trying to release youth before the guideline is up, or at the earliest possible range on the guideline, so long as there is sufficient progress on treatment. One YPA member also endorsed the belief that YPA has the authority to release youth prior to meeting the guideline; however, the respondent had not seen this happen[18].

Treatment Planning. The treatment plan is directly related to LOS because of the rehabilitative goals of the juvenile justice system. All YPA members indicated that a primary purpose of secure care is to rehabilitate youth so they can function in society. As such, youth are eligible for release when they have both completed their guideline and made sufficient progress on the treatment plan. YPA members described one primary role of the board as helping youth to understand that release from the facility is contingent upon the progress they make on goals as identified in their treatment plan. Overwhelmingly, however, YPA members indicated that treatment plans were created by staff. YPA members identified that treatment plans center on specific treatment domains, depending on the youth's individual needs: education, relationships, attitudes and behaviors, mental health, and skills. These are domains from the Protective Risk Assessment (PRA); however, few YPA members had heard of the PRA and none endorsed familiarity with the assessment.

YPA members indicated that the board has the authority to emphasize certain domains (referred to as "starring" the domain) if they felt it was particularly important after talking to the youth during the hearing. This was intended to signal to youth, and the treatment team, that scores from the "starred" domain would be especially important when determining eligibility for release. No YPA members, or staff, identified a standard for assessing how much weight a starred domain is given when making release decisions. All of the YPA members indicated they had the authority

[17] It is worth noting that sex offenders (M=362.9 days) did not actually receive significantly longer guidelines relative to non-sex offenders (M=337.7) in a statistical sense. The difference may, however, be of practical significance.

[18] Recall that the quantitative section indicated just less than 30% of youth were released short of the guideline, but this may be due to the methodology used to create guidelines. Multiple guidelines were summed. In cases where they were actually continuations of previous guidelines (rather than a new guideline), actual LOS would appear shorter than the summed guideline.

to make adjustments to the treatment plan—based on the youth's file and information presented at the Initial Hearing—but said this rarely happens because the staff is thorough and knows the youth better than YPA members do. All YPA members identified education as an essential component of treatment, and indicated that this is the domain that they would add to all youths' treatment plans if it were not already included. In both interviews and surveys, staff also perceived that YPA members are focused on youth graduating from high school, where feasible, while they are in long-term secure care. The majority of YPA members also indicated concern with substance abuse and said they specifically ask questions about drug and alcohol use in the hearing to see if that domain should be included as a treatment target.

Developing the treatment plan. Overwhelmingly, case management staff identified case managers as the primary person responsible for developing youths' treatment plans (84%). Most commonly, respondents described this role as consisting of the following tasks: completing the Protective Risk Assessment (PRA); identifying priority risk areas; and developing the needs assessment service plan (NASP). More than one-third of case management staff (37%) described the process for creating the treatment plan as a collaborative one between case management and secure facility staff. Most commonly, respondents identified that case managers were responsible for creating the initial treatment plan, which was subsequently revised based on input from the youth and his or her family, secure facility staff, and the youth's changing needs over time. Two respondents made a distinction between the needs assessment service plan, which is developed by case managers, and the treatment plan, which is based on the NASP but is created by a therapist. In comparison, a smaller percent of secure facility staff (19%) identified themselves (or other secure facility staff) as having a primary role in developing treatment plans. Similarly, relatively few secure facility staff (11%) described the creation of the treatment plan as a collaborative process between case management and secure facility staff. More commonly (50%), secure facility staff identified that they had primary responsibility for implementing the treatment plan, helping youth achieve treatment goals, and making adjustments to the plan in response to youths' changing needs.

Treatment targets. Sixty-six respondents answered the survey question regarding components of the treatment plan ("What do you think are the most important needs to address in youth's treatment plan?"). Of those, almost half (44%) used the terms "dynamic risk" or "criminogenic need" to describe the most important treatment targets (see Table 17). When compared to secure facility staff (24%), a larger percent of case management staff (59%) identified dynamic risk factors as the most important treatment target. Respondents also identified treatment targets from the Protective Risk Assessment (PRA), which assesses dynamic risk factors related to delinquent behavior: attitudes (11%); education (12%); mental health (14%); relationships (24%); skills (24%); and substance abuse (11%). Most commonly, respondents identified skills,

Table 17. Treatment Targets

	CM	***SF***	***Total***
Total N	*37*	*29*	*66*
Percent who endorsed (%):			
Dynamic risk factors	59	24	44
Attitudes	14	7	11
Education	16	7	12
Mental health	22	3	14
Relationships/Family	22	28	24
Skills	22	28	24
Substance abuse	8	14	11
Engagement	5	24	14
Collaboration	11	38	23
Other	30	17	24

such as consequential thinking or self-monitoring. Relationships were identified as an important treatment target by the same percent of respondents (24%); the majority of those responses (69%) specifically identified family relationships, family engagement with treatment, or family dynamics as an important treatment target. In total, nearly all respondents (80%) either used the term dynamic or criminogenic need and/or listed a specific dynamic need as identified by the PRA (not in table).

In comparison to case management staff, secure facility staff more frequently identified engagement with treatment (for youth and family) as an important component of the treatment plan. Secure facility respondents also identified collaboration—between facility staff and case managers and also between facility staff and community-based treatment providers—more frequently than case managers as an important component of the treatment plan. Case managers (22%) identified mental health needs—medication or mental health therapy—more commonly than secure facility staff (3%). One-quarter (24%) of all respondents identified additional components of the treatment plan, most commonly compliance with court obligations, such as restitution or community service, and youths' history of trauma. One-fourth of case management, and seven percent (7%) of secure facility, respondents stated that treatment goals should be tied to the presenting offense episode (POE). Several respondents, however, indicated that the treatment plan should encompass the youth's entire history and not just needs related to the POE.

When looking at treatment targets by position, supervisors in secure facilities most frequently identified collaboration (36%) and skills development (36%) as important components of the treatment plan; counselors in secure facilities most frequently identified youth engagement with the plan (31%) and collaboration (31%); case manager supervisors most frequently identified dynamic risk items (83%); and case managers most frequently identified dynamic risk items (44%) and skills development (24%). The vast majority (82%) of administrators—both case management and secure facility—identified dynamic needs most frequently as the primary treatment target.

When looking at treatment targets by facility, collaboration was one of the most commonly listed goals in 3 of 5 facilities and engagement was one of the most commonly listed targets in 2 of 5 facilities. When looking at treatment targets by case management region, dynamic risk factors were the most commonly listed component in 7 of 9 regions.

Determining When Youth are Released.

Responsibility for assessing progress. As noted earlier, LOS is a function of both the calculated guideline and youth's progress within each domain in his or her treatment plan. When asked whose responsibility it is to assess youth's progress in treatment, all of the YPA members identified that they rely on staff reports to make this decision. While YPA members may be interested in youth's progress in specific areas—education and complying with the rules of the facility were most commonly mentioned—they all indicated that the primary basis for their decisions comes from staff reports (both written and presented at the hearing).

All survey respondents described progress assessment as a function of the treatment team. The majority of respondents who answered this question (66%, n=64) indicated that the responsibility

was equally shared by both secure facility staff and case managers. One-fourth (27%) of respondents indicated that secure facility staff have a bigger role in assessing progress while the youth is in the facility. Thirty-seven case managers answered this question, with more than half (59%) saying progress assessment is a decision shared equally among secure facility staff and case managers. In contrast, almost one-third of case managers felt the decision rested more with secure facility staff (30%) while the youth was in the secure facility; a small minority (11%) said it was primarily a case management decision. Twenty-seven secure facility staff answered this question, and three-quarters (74%) felt that the decision was equally shared among secure facility staff and case managers, while 22% felt that secure facility staff played a bigger role in assessing treatment progress while the youth was in the facility because they had daily contact with the youth and primary responsibility for implementing the treatment plan. Results were similar across all five facilities.

Defining progress. For YPA hearings, JJS staff writes a report that summarizes youth's progress since the last hearing (regardless of the length of their initial guideline, all youth have a progress hearing every 6 months). As part of this report, youth receive a rating in each of their treatment domains (Excellent, Good, Fair, and Poor). Staff also makes a recommendation to the board as to whether or not the youth is ready for parole. All YPA respondents identified that their primary indicator of progress in treatment (and therefore of youth's readiness for release) was staff's recommendation that the youth was making changes. All YPA members said that a youth had to receive an Excellent or a Good on each treatment domain before they would consider parole. A small percentage of YPA members identified specific changes they felt were important in order to consider release: improved grades, following the rules, improved peer relationships, and not using drugs. However, YPA members who identified specific signs of treatment progress all indicated that their knowledge of youth's change came in the form of staff reports.

In the survey, staff was asked to identify the most important indicators that a youth is making progress on the treatment plan. Most commonly (73%), respondents indicated that observable, behavioral changes were the best indicator of progress (see Table 18). From these responses, the research team created sub-codes based on the type of behavior change: the majority of responses described general behavior (adjustment to the facility, lack of incidents, and daily ratings) as an important indicator of change. Half of respondents described youth's use of a new skill (such as confronting peers on negative behaviors in a pro-social way). Slightly more than one-quarter of responses described youth's completion of tasks related to the

Table 18. Assessing Progress in Treatment

	CM	***SF***	***Total***
Total N	*36*	*23*	*59*
Percent who endorsed (%):			
Attitudes	58	57	58
Anti-social attitudes[1]	*10*	*0*	*6*
Engagement[1]	*29*	*31*	*29*
General[1]	*48*	*46*	*47*
Behavior	72	74	73
Completion of treatment tasks[2]	*31*	*24*	*28*
Demonstrating new skills[2]	*54*	*47*	*51*
General[2]	*62*	*71*	*65*
Input from others	19	39	27
Internalized treatment plan	28	56	39
Relationship quality	11	22	15
Lower level of assessed risk	22	0	14
Schoolwork	11	22	15

[1] Of those who identified attitudes as an important indicator of change
[2] Of those who identified behavior as an important indicator of change. Total does not sum to 100 because respondents could provide multiple answers.

treatment plan (such as assignments and action steps). The difficulty separating behavioral issues related to treatment goals from general behavioral issues emerged in a portion of comments. One respondent attributed the conflation of treatment-related behavior with non-treatment related behavior to the way that youth are rated within the cottages:

> "Providers of service need to separate level systems built on non-criminogenic factors [from] programming built on skill development and level progression."

Case management and secure staff were similar in the importance they placed on all three types of behavioral change.

The second most frequently identified indicator of change was attitudes (58%). Once again, responses were coded into sub-categories. Nearly one-third of responses where attitudinal changes were identified as an important indicator of progress described youth's attitude with respect to treatment (e.g., engagement with treatment or level with respect to the stages of change). A small percent of responses (6%) specifically referred to changes in youth's endorsement of anti-social attitudes. The majority of responses (47%) did not specify what was meant by attitude or described changes in youth's overall attitude (e.g., positive outlook or general affect). Once again, case management and secure facility staff appear to place similar importance on the role of attitudes in assessing progress in treatment.

The indicators of progress upon which there was the most difference between secure facility and case management staff were in the areas of youth's internalization of the treatment plan (e.g., ability to describe his or her plan, what he or she has learned, and the progress he or she has made) and input from others (e.g., youth's apparent change is confirmed by other staff or family members), both of which were more frequently endorsed by secure facility staff. A small percent (14%) of respondents, all case management staff, described lower assessed risk of recidivism as an important indicator of change.

There was some variation when looking at indicators of change by facility. Respondents from one facility identified the engagement sub-category of attitudes as an important indicator of progress twice as often as staff from the other facilities. In one facility, staff identified relationship quality between youth and staff as an indicator of progress five times more frequently than staff from the other facilities. While more than half of respondents from four facilities identified internalization as an important indicator of progress, only one-third of staff from a fifth facility identified this as an important indicator of progress. On all other indicators of progress, staff responses were similar across facilities.

Developing treatment ratings. Because YPA interviews and survey results both indicated that the primary factor in determining whether a youth was released from the facility was the attainment of Good or Excellent ratings on all his or her treatment domains, the process for assigning ratings was further explored in interviews with secure facility staff. All respondents described that process as collaborative. At a minimum, the youth's Advocate writes a monthly report that summarizes both the daily ratings (performance in the cottage as rated by line staff, for which all facilities had written criteria) and the Advocate's work with the youth on their treatment plan. The Advocate and Supervisor then meet to discuss and make adjustments, as

necessary, to this progress report (in some cottages this is a one-on-one meeting, in others this happens during weekly staff meetings). This monthly report is discussed with the youth, parents, and facility-based treatment team and is forwarded to the case manager. The youth's case manager meets with the treatment team every 90 days (at a minimum) to discuss these reports and youth's overall progress. The final ratings emerge from these daily ratings, regular meetings, and monthly reports; they are developed in a larger, pre-hearing discussion that includes the youth and family, case manager, school staff, and therapist.

The youth's behavior is largely quantified through the daily ratings (e.g., was a particular task completed or not). Across facilities, however, staff acknowledged that assessing progress on treatment domains (e.g., the acquisition of a new skill or reduction in anti-social attitudes) was more subjective. The inclusion of a wide range of staff in treatment team meetings is one means for addressing this subjectivity: each member of the team is able to hear other staff's experience working with the youth. This helps ensure that youth are not given poor ratings as the result of conflict with one person and also that they are not given good ratings when they are "performing" for someone they believe is responsible for rating them. One respondent described this as a way to answer the question: "Are we all seeing the same thing?"

Across all five facilities, staff described similar informal criteria that form the basis of these ratings. The distinction between categories—for all of the treatment domains—largely centers on consistency in new or frustrating settings or situations. For example, Poor would be a refusal to abide by treatment requirements or rules of the unit; Fair would be beginning to talk about or make changes; Good would be making changes in some settings and situations; and Excellent would be making changes that are consistent across settings and situations. However, some (but not all) staff in two facilities described a Fair rating as one where the youth is not working on treatment but is also not disruptive in the unit. Given that the difference between Fair and Good is the difference between being eligible for release and not, differences in the definition across staff, cottages, and facilities could influence an individual facility's average LOS. Only one facility identified having written guidelines outlining the criteria that distinguish between the assessment categories.

In both surveys and interviews, staff at all the facilities described variability that arises—and is necessary—when assigning ratings on treatment goals, due to differences in youth's baseline behavior and overall capabilities. As described by one respondent, the assessment process requires that staff balance between youths' individual needs and larger system goals:

> "We also need to look at our expectation on the youth, and whether or not we are asking too much. Perhaps we are not looking at baby steps we are looking at big leaps for a youth, and they are overwhelmed by what we are asking. Also, we need to stay focused on what is making them a risk to the community. I encourage staff to not get caught in trying to make a teenager act like an adult."

The primary concerns that emerged from the interviews, with respect to assigning ratings, were: 1) the importance of distinguishing between delinquent behavior and 'typical' adolescent behavior, particularly when staff is concerned with disruption to other youth in the facility; 2) the lack of formal guidelines with respect to how long a youth has to be "good" or "excellent" to be

recommended for parole; and 3) determining the relative importance of progress on treatment goals compared to following rules in the cottage.

The majority of interviewees indicated a belief that treatment progress should weigh more than institutional behavior; many of those respondents, however, were not sure that this is how decisions are actually made. A small number of respondents indicated that behavior on the unit was the best indicator of treatment progress. More commonly, staff identified that behavior on the unit was one indicator of treatment progress, but that they had also worked with youth who followed all the rules but were not making changes with respect to attitudes, skills, or other treatment domains. One respondent identified that treatment should be 75% of the rating and behavior should be 25%, but that "it becomes easy to give good ratings to well-behaved kids who may not be progressing on their treatment goals." A small number of respondents indicated that youth's behavior sometimes got worse, temporarily, if they were working in treatment because they were processing complex and difficult emotions. Throughout the facilities, staff expressed concern that in some cases youth stayed longer due to "relatively minor behavior that is unrelated to risk factors," although no respondents believed that this was a common occurrence. No facility staff reported using the Protective Risk Assessment (PRA) or other assessment to determine progress in youth's treatment domains. A portion of staff, however, did identify the importance of using assessments when assigning ratings, as exemplified in the quote below:

> "It should be a majority team decision. It should be the supervisor, therapist, counselors and caseworker. There should be some type of assessment as well as documentation to back their decision up."

Staff working with sex offenders did identify multiple strategies, including actuarial assessments, for determining youth's level of progress in treatment.

Recommending youth for release. While YPA has the sole authority to release youth from secure facilities, staff has a functionally significant role in this decision because they choose whether or not to recommend a youth for parole. In interviews, staff was asked to describe the circumstances under which they were most likely to recommend that a youth stay beyond the initial guideline. In all five facilities, staff identified that they would recommend a youth stay longer if she or he were engaging in physically violent behavior that posed a threat to staff or other residents. When looking at the impact of problem behaviors that did not rise to the level of assault, with respect to whether or not a youth would be recommended for parole, there were some differences across facilities: (1) not following the rules or advancing through the levels in the cottage (5 facilities); (2) not complying with or engaging in treatment (4 facilities); (3) and acting out at the middle or end of the placement (e.g., assuming a period of adjustment for youth that will not count against them in their ratings [2 facilities]). Staff from all five facilities identified some movement in treatment as a precursor to being recommended for parole; most commonly, this was described as "complying with," "completing," or "engaging with" treatment. In two facilities, staff specifically described that youth must demonstrate they can identify and interrupt their cycle of offending. As exemplified in the following response, staff from all five facilities expressed concern that "kids who behave are more likely to get out at their guidelines even if they don't do treatment." However, no staff believed this was common and staff from all

five facilities described processes—such as regular treatment team meetings—to guard against this.

Staff was also asked to identify if there were circumstances where a youth might receive a Good or Excellent rating on all treatment domains and not be recommended for parole. In all five facilities, staff indicated that youth must serve their guideline (e.g., stay for the minimum number of months determined by the YPA) before they will be recommended for parole. In three of the facilities, however, a percent of staff indicated that they were trying to shift towards releasing youth before the guideline is up, or at the earliest possible range on the guideline, so long as there is sufficient progress on treatment. In general, staff indicated that it was very rare for a youth not to be recommended for parole once he was doing well in all his or her treatment domains. In all five facilities, staff identified that this occasionally happens if the youth's placement falls through or if he or she is close to receiving a high school diploma. Respondents surmised that both of those instances would only extend the stay for 1-2 months. Both staff and YPA members identified very rare instances where a youth might get Good ratings in his or her treatment domains but not be recommended for release due to concerns for public safety. This was identified as something that would happen only in a case involving murder.

The decision to release. As noted earlier, the YPA has sole authority over the release decision; however, YPA members and secure facility and case management staff indicated that the YPA follows staff recommendations in the vast majority of cases. In fact, many survey respondents reported never having seen a case where the YPA went against staff's recommendation. This is congruent with YPA interviews, which also indicated that the YPA follows staff recommendations 90-95% of the time. Both survey respondents and YPA members identified rare instances where treatment team members were in disagreement with respect to whether or not the youth should be released; in those cases, the decision of whether or not to release was often postponed. Staff also identified instances where the YPA had been provided insufficient information on a case and refused staff's recommendation (YPA members did not identify any instance of this happening). Several survey respondents identified rare instances where staff was not recommending release, because the youth had not completed court-ordered obligations (restitution or community service), but YPA released the youth anyway. Several staff also identified that the YPA will not release a youth if, during questioning at the hearing, the youth does not seem ready for release; a small number of staff attributed this occurrence to cases where the youth's guideline had been aggravated and the YPA therefore had higher standards for progress. Most commonly, YPA members identified that they will not release youth immediately, even when staff is recommending release, if the youth is close to completing his or her high school diploma. In this situation, the youth's stay would be extended by a short time (1-2 months) so he could complete his or her diploma in the facility. Across all five facilities, staff indicated that a release might be delayed as the result of the transition placement falling through; however, this would result in parole being postponed rather than denied.

Almost half (47%) of case managers and case manager supervisors said they participated in the development of a treatment team recommendation in terms of when youth should be released. One-third (33%) indicated that they made a recommendation to the YPA (and did not specify whether this was developed in conjunction with, or as part of, the treatment team recommendation). Ten percent (10%) indicated that they participated in the development of a

team recommendation but also could be asked by the YPA for their own recommendation during the hearing. Slightly more (55%) secure facility staff (counselors III and supervisors of counselors III) said that they made a recommendation regarding release as part of the treatment team. Forty-five (45%) said they made a recommendation to the treatment team (rather than the YPA) but did not specify whether they participated in treatment team discussions. For example, one counselor III in this category responded saying: "I do not determine when they are released. I only rate the youth based on his or her behavior, treatment goals, and progress." Another responded saying: "My recommendation is on the progress and parole reports." Ten percent (10%) of both case management staff and secure facility staff indicated that the opinions of secure facility staff weigh more than case management staff with respect to release decisions from a secure facility.

The majority of case management respondents (81%) indicated that they usually agreed with facility staff's recommendations with respect to youths' treatment plan and readiness for release. In large part, this was attributed to regular, ongoing discussions with the entire treatment team. A smaller percent of case management staff (19%) indicated that they sometimes disagreed with secure facility staff; for the vast majority of respondents, these were quickly resolved through treatment team discussions. For case management staff, the primary source of disagreement with secure facility staff was assessing the degree to which a youth had made measureable change in the facility (and were ready for release). Secure facility staff also indicated that they were largely in agreement with case management recommendations (80%). In instances where there was disagreement (21%), this was most commonly related to components of the transition plan, such as the suitability of the placement or the treatment provider. These numbers were similar when looking at results by secure facility and case management region.

Denial of parole. The majority of YPA members indicated that the decision to release has been made prior to the actual parole hearing (based on the assumption that staff would not be recommending a parole hearing for a youth who had not completed his or her guideline and also made sufficient progress on treatment). Similarly, three-fourths (73%) of survey respondents identified that the primary reason for which the YPA would deny parole was due to staff recommendation. In some cases, youths' behavior changed between the recommendation for a parole hearing and the actual hearing itself: if youth did not make expected progress on treatment goals or committed new offenses in the facility he or she might not be granted parole at the parole hearing. Across all five facilities, staff identified that some of these instances involved youth who deliberately "sabotaged" their release, once a parole date was set. A small number of staff perceived that youth were denied parole based on a failure to comply with court obligations (community service or restitution) or lack of remorse for the crime. No YPA members indicated that they would deny parole based on these requirements, which suggests that opinion might reflect staff's inclination not to recommend the youth for parole more than YPA members' reluctance to release to parole. Staff and YPA both indicated that a youth's parole might be delayed (but not refused) in instances where the transition placement fell through or was deemed insufficient and also in cases where the youth was close to completing a high school diploma.

Returning Youth to Secure Care After Parole. During a trial placement, youth can be returned to the secure facility for a range of behaviors. In interviews, many YPA members described returning youth for a short period of time and referred to this as a "tune-up," which was intended

to prevent delinquent offending among youth who struggled during the transition out of the facility. Once a youth has completed the trial placement, and is paroled, they may be returned to the facility due to violating a condition of the parole agreement or committing a new crime. In both cases, the youth would appear for a hearing in front of the YPA, who would decide whether, and for how long, to return the youth to secure care. Because the YPA retains jurisdiction over youth until they are terminated from parole, any returns to the facility would be counted as part of the original LOS. All of the YPA members indicated that the case managers make the decision whether or not the violation or new crime is severe enough to merit an appearance in front of the YPA. No YPA members knew what criteria case managers used to make that decision, but assumed that kids were "not brought in for a hearing on their first violation," indicating that the decision to return a youth for violating happens largely at the discretion of case managers. Almost all YPA members identified that kids who are brought in for a hearing are returned to secure care rather than released. Case managers make a recommendation in terms of how long the youth should return to the facility; YPA members indicated that they almost always follow this recommendation. Secure facility staff also identified the decision to return a youth to secure care as one that falls under case managers' jurisdiction. Several secure facility staff indicated that they try to be involved in this decision, through ongoing contact with the case managers, out of concern that terminating parole would "undo" all of the work that had gone into creating the transition plan:

> "The case manager has the biggest role in determining the conditions of parole and potential placement of the youth exiting secure. Secure care staff and supervisors don't have much of a say in this, although we know the youth well and could offer some valuable insight to help the youth be placed in the most effective place possible."

Because case managers were not interviewed as part of this study, there is no information available for this study with respect to the criteria that case managers use when requesting that parole be terminated.

Discussion

Quantitative Summary

The quantitative section of the report examined outcomes for youths who exited JJS jurisdiction in the years 2008 to 2013 following a secure care placement. Outcomes indicated that, perhaps unsurprisingly, youths in secure care had both extensive and serious delinquency histories. Nine of every 10 youths had a property offense history pre secure care, and almost three of every four had a person offense. Sexual assault offenses occurred in over one in 10 youths, as did non-violent sex (status) offenses. The average youth had 4.5 property offenses, and almost two each of person, alcohol and drug, public order and (other) status offenses. Almost 90% of the cohort had a felony charge pre secure care, and well over half (65.4%) had an offense severity of second degree felony or above.

Youths in this cohort tended toward early involvement with the legal system. The average age of first arrest was just under 13 years old. They also had PRA profiles that indicated high ratios of risk relative to protection on most of the PRA's domains. Having a history of neglect or abuse was rare relative to personal delinquency histories, but victimization histories may understate the problem because of the fact that capturing them partially depends on a third party reporting the victimization and formal charges being filed.

Given the historical factors revealed by the aforementioned analyses, predictive models of length of stay (LOS) in Utah's secure care facilities were next examined. Factors considered for inclusion were based on both theory (e.g., from past literature) and bivariate relationships in the present data. The relative infrequency of females in secure care, and their drastically different histories from males, made a gender invariant model impossible to fit. Models were considered for females only, but parameter estimates were highly unstable and the modeling process for females was jettisoned.

The modeling process turned to a male only model of factors predicting LOS. The number of youths available in this analysis was restricted to males with complete PRA version 1.05 assessments. The first model examined only secure care facility as a predictor of LOS. Irrespective of significance, the pattern considering pairwise comparisons indicated Southwest, Wasatch and Millcreek trended toward longer LOS than Decker Lake and Slate Canyon. A second model added additional predictor variables from delinquency history, PRA assessment outcomes, victimization history, and youth demographics in order to determine whether facility based differences in LOS were a function of the differing youths housed by each facility. A third model added post secure care start offenses. With respect to facility differences, controlling for youth factors and delinquency histories (whether pre secure care start only or pre and post secure care), three clusters emerge for LOS. Decker Lake and Slate Canyon (cluster 1) have consistently shorter lengths of stay than Mill Creek and Wasatch (cluster 2), which, in turn, have shorter (though non-significant) lengths of stay than Southwest (cluster 3). Interpretation of the outcome is reserved, as the models do not allow one to place a value judgment on LOS at the facilities; (i.e., they cannot argue whether one facility's LOS is more appropriate than another), and the models do not control for all differences that are related to LOS but that were not available in the data (e.g., treatment progress, institutional behavior, or secure care staff attitudes).

With respect to other (i.e., non-facility) variables predicting LOS, the model including only pre secure care factors indicated that having a person offense, a more severe crime class for most serious offense, and greater risk on the PRA attitudes and behaviors risk score pre secure care were all predictive of longer LOS. Being older at first arrest and having an alcohol or drug offense pre secure care both predicted shorter LOS. When post secure care offenses were added to the model, the pattern of results changed notably. Having a non-violent sex offense became a significant predictor of longer LOS, but having a person offense pre secure care became non-significant. A more severe crime class for most serious offense and greater risk on the PRA attitudes and behaviors risk score pre secure care remained significant predictors of longer LOS, as were presence of a person offense or any offense post secure care. Only older age of first offense predicted shorter LOS in the final model. The final model explained the most variance in LOS (19.8%), but is less interpretable than the model including only pre secure care factors because post secure care factors are not known at the time the guideline is established.

Qualitative Summary

The qualitative section of the report provided analysis of surveys with case management and secure facility staff and interviews conducted with secure facility staff and YPA board members. The questions focused on five decision points that were surmised to impact LOS: (1) setting youths' initial guideline, (2) creating youths' treatment plan, (3) assessing youths' progress on the treatment plan, (4) deciding to parole youth, and (5) deciding to return youth to secure care.

Interviews with YPA staff indicated the process of setting a youth's initial guideline was perceived as objective and fair; however, it was also the case that the calculated guidelines were reported as sometimes being aggravated, but never mitigated, during the initial hearing. Despite the fact that mitigating circumstances are provided in the guideline matrix, staff were more likely to refer to aggravating factors when describing characteristics that influence the guideline. A portion of staff respondents cited the YPA's use of aggravating factors that are not part of the matrix to enhance the guideline. These included: attitude during the hearing, behavior in the facility, and progress and engagement with treatment.

All YPA members indicated that a primary purpose of the secure care environment is rehabilitative, but YPA members themselves indicated they were not actively part of the process of creating the treatment plans. While YPA members indicated they could make changes to the plan, they also indicated they rarely did, with the exception of emphasizing the goal of having youths complete a high school education while in the facility. Treatment plans were primarily identified by staff as being the responsibility of case managers (though 37% of case managers and 11% of secure facility staff identified the process as collaborative between the two groups). Treatment plans are derived from the PRA, which identifies targeted risks and needs.

For YPA hearings, JJS staff writes a report that summarizes youth's treatment progress since the last hearing. The report provides a rating in each of the youth's targeted treatment domains, and also makes a recommendation to the board as to whether or not the youth is ready for parole. YPA members depend almost entirely on these staff reports to determine treatment progress (the primary determinant of release given an established guideline). Coding of staff surveys indicated

the assessment of treatment progress by staff was determined by behavior change, change in attitudes, internalization of the treatment plan, input from others, relationships, improved schoolwork, and lower assessed risk. Interestingly, only case managers (and no secure care staff) identified lower assessed risk as an indicator of treatment progress despite the fact that the treatment plan is based on the PRA risk assessment. In interviews, secure facility staff identified the PRA as a treatment planning tool; none endorsed its use as a way to measure treatment progress. Many staff did not perceive that the PRA added insight or dimension to the informal assessments they developed through time spent with the youth and in treatment team meetings.

Because YPA interviews and survey results both indicated that the primary factor in determining whether a youth was released from the facility was the attainment of Good or Excellent ratings on all of his or her treatment domains, the process for assigning ratings was further explored in interviews with secure facility staff. Ratings reported to the YPA are a function of collaboratively determined daily ratings, regular meetings and monthly reports. However, staff acknowledged that the process, while collaborative, was also subjective. Ratings lack formal guidelines for determining Poor, Fair, Good and Excellent in practice; conceptually, the ratings overlap (but only Good and Excellent qualify youth for parole); no formal definition exists for what duration ratings of Good and Excellent need to be maintained; and treatment progress is conflated (to varying degrees) with institutional behavior. While the YPA has the sole authority to release youth from secure facilities, in a practical sense, that decision is inexorably connected to the recommendations of staff upon whom the YPA depends for all information relevant to release.

Once released from secure care, youth enter trial community placements. Youth who do well on trial placements are paroled. Youth can be returned to secure care while on either trial placements (if struggling following the rules in the community placement, for example) or parole (for violations or new delinquent acts). The YPA indicated that case managers make rescission or revocation decisions, and provide recommendations for additional secure care stays.

Synthesis

The quantitative and qualitative components of the research project complement each other well in several respects. One of the notable findings from the quantitative component was that even the best fitting model explained only 19.8% of the variance in LOS, indicating that 80.2% remains unexplained by available CARE data. Theoretical considerations from the literature review suggested that treatment progress and institutional behavior are other important determinants of LOS. Though (at the time) data did not exist in the CARE database to address these issues within this cohort of youth, interviews with staff supported the hypotheses. YPA members and staff identified treatment progress as the key determinant of consideration for release. Statistical models are thus likely limited by the absence of treatment progress data, and it is likely the case that (1) the role of historical factors and delinquency histories would be notably weaker in determining LOS if treatment progress and institutional behavior were also considered, and (2) a great deal of additional variance in LOS could be explained if these variables were available.

These hypotheses suggest that future research should include indicators of these factors. The CPT system now allows treatment progress to be recorded using the four-category (Poor, Fair, Good, Excellent) rating system, but, as the qualitative component of this study suggests, those ratings are not yet objective, documented and standardized metrics for assessing treatment progress. Statistical models cannot compensate for an unreliable measure, and to the extent that treatment progress ratings are unreliable (across ratings or facilities) and/or are subjective, the role of treatment progress in LOS cannot be adequately understood.

Theoretically, LOS in an indeterminate system would be a combination of only two (broadly defined) factors: the guideline (which incorporates delinquency history) and treatment progress. The quantitative component of this study indicated that the relationship between the guideline and actual LOS was relatively weak. It was discussed that this was not necessarily disconcerting, however, because of Utah's indeterminate sentencing structure; release is dependent on treatment progress, which cannot be predicted in advance. However, because both staff and the YPA consider the guideline the minimum LOS, and because factors do not exist to reduce LOS below the minimum guideline, the guidelines do not effectively serve their intended purpose. Without taking into account the typical range of time youth with similar histories take to demonstrate rehabilitation, the guidelines will continue to be inaccurate, and will serve instead to set only a lower-bound for LOS. A conundrum exists, however, in the fact that treatment progress, currently, is ill-defined and is, therefore, of little practical use in refining estimates of LOS.

A logical first step to improve LOS estimates is to document and standardize the assessment of treatment progress. This could be achieved, in part, by reassessing youth regularly on the standardized, objective tool already available, the PRA (the assessment on which the treatment plans are based). The quantitative section of the report indicated that the PRA is administered every 141 days on average for the period between secure care start and YPA jurisdictional termination. Well within the JJS policy for reassessment (180 days), this frequent reassessment provides the ideal opportunity to consider the PRA at every progress hearing, but that does not appear to occur in current practice. In staff surveys, only 14% of staff (22% of case managers and 0% of secure care staff) identified lower assessed risk as an important factor in determining treatment progress.

Recall from the quantitative component of this report that change scores (item, domain and total) on the PRA were considered as predictors of LOS in the modeling process. None of these were included in the final model, however, because none of them were significant in the bivariate relationships. Analysis of these change scores as predictors of LOS is a crude method of assessing the relationship (i.e., it does not account for the fact that different youth have different identified, domain-specific treatment needs and might, therefore, only be expected to make progress on relevant domains); however, the fact that none of the change scores predicted variation in LOS does suggest that measurable changes in risk and needs are not being translated into LOS or release decisions in an effective manner. The degree to which the PRA is sensitive as an assessment of treatment efficacy is an empirical question. If it is, its implementation as a formal treatment progress assessment tool would accomplish two important goals: (1) it would provide an objective measure of treatment progress in accordance with Utah's indeterminate sentencing structure, and (2) it would reduce the conflation of (i.e., the unintentional combination of the two concepts as one) poor institutional behaviors and lack of treatment

progress. Conflating institutional behavior with rehabilitative progress is a concern to the validity of an indeterminate sentencing structure. This statement is not meant to undermine the extreme importance of managing behavior in order to ensure the safety of staff and resident youth, and in order to allow an environment conducive to rehabilitation. However, treatment progress and institutional behavior should also not be treated as a single construct. Treatment progress is criminogenic, and speaks to the rehabilitation of a youth and his or her ability to be reintegrated into society; favorable institutional behavior is specific to the unique context of the secure care environment, and is not an indicator of rehabilitation targeting specific needs.

The role of the YPA could also be enhanced in an effort to improve the objective determination of LOS. Interviews with YPA members indicated they identify one of their primary responsibilities as oversight (i.e., to make sure JJS does what it says it will do, to make sure rights of both youth and the community are protected). A portion of staff also endorsed this view (i.e., that the YPA members provide accountability for JJS staff). This role is compromised, however, by the YPA's acknowledged, heavy reliance on staff opinion. While not universally true, many YPA members lack formal, advanced training on evidence-based practices in juvenile justice. Because of that lack of formal training, compared to secure care staff, YPA members are (both objectively and by their own account) less prepared to form an unbiased opinion about appropriate treatment targets, standardized definitions of progress, or the possible iatrogenic effects of secure placements. Much of their independent role in determining release is, inadvertently, circumvented by their reliance on the opinions of relatively more experienced staff. Indeed, the review of the Illinois' Juvenile Justice System indicated a similar lack of formal training for parole board members was a serious threat to the indeterminate sentencing system in that state (Illinois Juvenile Justice Commission Youth Reentry Improvement Report, 2011). The report concluded:

> The state must therefore develop heightened qualifications for PRB members who will handle youth caseloads and meaningful measures to identify and retain qualified Board members. Youth-appropriate qualifications must be demonstrable prior to hearing a juvenile parole case, not acquired on the job or "as a result" of hearing youth cases, as is currently the situation. PRB members must also receive advanced, on-going professional development and training. (p. 25)

The need for additional training on the factors that are relevant to LOS and release decisions also exists among Utah's secure care staff. Interviews and surveys indicated that staff decisions tended to rely exclusively on professional judgment without input from standardized assessments; this tendency may or may not align with evidence-based practices. Because they are the primary individuals advising the YPA regarding release decisions, it is important that the YPA be formally trained to interpret their recommendations, but also that secure care staff receive similar training in evidence-based practices. While it is beyond the scope of this report to address whether secure care staff training with respect to drafting reports impacting release decisions is adequate, this report can comment on the perceptions among staff about the adequacy of the training. One staff member summarized the issue:

> We need a training department that can teach a core curriculum that addresses the behavior cycle, beliefs and [the] skill building piece. We also need clinicians that can

understand our concept of risk is more than trauma, neglect and abuse; it is about recidivism.

Summary Points

Moving forward, three recommendations might help address the lack of concordance between LOS guidelines and actual LOS, and the subsequent impact discrepancies between the two have on accurately defining LOS as a meaningful metric of rehabilitation:

(1) The process of determining LOS guidelines may benefit from reexamination. Guidelines may align more closely with actual LOS if they were adjusted to account for observed variation in the rate of achieving rehabilitative goals among similar secure care youth. As they exist, they represent only a lower-bound on LOS, and have limited utility for determining actual LOS or release. Even with revision of LOS guidelines to incorporate expected duration of measureable treatment progress, however, the perceived purpose of guidelines may need to be universally redefined. Rather than serving as a lower or upper-bound, guidelines should be interpreted as an expected range around which individual youth can and will vary (but in both directions).

(2) A plan for transitioning to documented and objective standards for defining treatment progress should be considered. This second goal, which is not independent of the first, could be accomplished, at least in part, by adoption of the PRA by facility staff and the YPA as an objective measure of treatment progress (pending validation of its sensitivity to change in the secure care environment). Professional judgment should still be considered an important part of the process, but that judgment would have a more objective, standardized foundation from which it could be drawn.

(3) YPA board members might also benefit from additional training that facilitates the role of providing oversight of the JJS secure care release process. While the YPA would not necessarily benefit from training on implementation of the PRA, training that facilitated their understanding of its utility, and its usefulness as a treatment progress monitoring tool, might prove beneficial. This training might also focus on providing them with the tools to make a more informed and truly collaborative assessment of rehabilitative progress, including training on risk, needs and responsivity factors in general. Such training might also be extended to secure care staff, though the adequacy of current training is not estimable based on the results of this study.

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