Chapter Eleven

Mental Health Services and Juvenile Justice

Symposium
Civic Functioning and Mental Health During the Transition to Adulthood

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Symposium Introduction

Maryann Davis

In this session three large scale studies were presented that examined various issues regarding the overlap of mental health and juvenile or criminal justice involvement during the transition to adulthood. The first study presented data on juvenile and criminal justice involvement during adolescence and young adulthood among girls who were intensive public adolescent mental health service users compared to the general population. The second examined the effects of residential program involvement and case management on the likelihood of offending among those aged 18-25 in intensive public adult mental health services. The third study examined the impact of substance use on longitudinal patterns of offending in serious juvenile offenders during the transition years, focusing on its impact on desistance. The goal of the session was to inform the audience about the prevalence and nature of arrests in public system mental health populations during the transition years, similarities and differences in comparison to general offenders, and to provide information about factors contributing to decreases or increases in offending. Policy and service implications were emphasized.

Arrests during the Transition to Adulthood; Gender and Public Mental Health System Involvement

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Introduction

The transition to adulthood for youth with serious mental health conditions is a time of particular challenge. Longitudinal studies that have followed youth with serious mental health conditions from adolescence into adulthood have uniformly found that the majority struggle to assume adult role functioning (e.g. Davis & Vander Stoep, 1997; Vander Stoep, Beresford, Weiss, McKnight, Cauce & Cohen, 2000; Wagner, Kutash, Duchnowski, Epstein & Sumi, 2005). One of the most concerning findings is the high level of involvement with the juvenile and criminal justice systems (Davis, Banks, Fisher & Grudzinskas, 2004; Vander Stoep, Evens, & Taub, 1997). The general literature has consistently contained reports of many gender differences in antisocial behavior, offending, and justice system involvement (reviewed in Lanctôt, & LeBlanc, 2002; Moffitt, Caspi, Rutter & Silva, 2001). In general, less is understood about female than male offending, though the literature on female offending in the general population is growing. Within the literature on youth with serious mental health conditions, little is known about female offending, other than the observation, as with the general population, that it is at a lower rate (e.g. Vander Stoep, et al., 1997). There is also evidence that the relative risk of offending, compared to the general population, is higher in the female than male population with serious mental health conditions (Banks, Pandiani, & Schact, 2001).

The current study examined differences in patterns of arrest between a public mental health and general population of female arrestees. The study examined the ways in which public mental health system involved and non-system involved females differed in the following: prevalence of arrest by age 25, arrest onset age, and arrest rate at each age.

Methods

Sample

DMH Cohort. Subjects consisted of a statewide cohort of females born between 1976-1979 who received adolescent case management services from the Massachusetts Department of Mental Health (DMH) sometime during 1994-1996 (n = 739).

Non-DMH Cohort. Non-DMH arrestees consisted of all females with 1976-1979 birth years with a Massachusetts juvenile or criminal arraignment record (n = 34,436). The non arrested, non-DMH female population was estimated to be 125,284 (see method below).

Data sources

The Massachusetts DMH database was used to obtain individuals' adolescent case management status and gender. Arrest data were obtained from the state's Criminal Offender Record Information (CORI) system in July 2005. CORI data contained each individual's birth year and gender and information on their juvenile and adult arraignment histories in all non-federal courts in Massachusetts. Each arraignment record contained type of charge, court, date of arraignment, and final disposition. The cross-matching between the CORI and DMH data was done at the DMH, using a unique identifier. We included in our analyses all arrests occurring before individuals' 25th birthdays. Analysis of arrest prevalence in the Non-DMH Cohort was based on the general population of females with 1976-1979 birth years in the 2000 Massachusetts Census data. The number of females in any DMH database with the '76-79 birth years, and the number of the Non-DMH arrested cohort were subtracted from this figure to yield the population size.

Analytic Approach

The basic thrust of our analyses is a between-group (DMH vs. Non-DMH) comparison of arrest patterns within age. Statistical analyses for these comparisons were performed with SPSS version 14.0.1 (SPSS Inc., Chicago, IL, USA) and SAS version 9. Chi-square and t-tests were conducted to test for statistical significance, with Analysis of Variance used to test for the effects of two variables simultaneously. To determine significant age effects on arrest rates, paired comparisons of the arrest rate at each age with each other age was conducted using the McNemar test. Because few females were arrested at ages 7-12, analyses included arrests at ages 13-24.

Results

Arrest Prevalence

The relative risk of arrest was significantly higher in the DMH than Non-DMH cohort (Relative risk = 2.48; 95% CI = 2.18–2.78, $p < .0001$), with 46.3% of the DMH and 21.6% of the Non-DMH cohort having an arrest by their 25th birthday. Further analysis of the frequency of arrests indicated that 78.4% of the Non-DMH cohort had no arrest, 13.4% had a single arrest, and 8.2% had multiple arrests. In the DMH cohort more females had multiple than single arrests (53.7% no arrests, 16.2% single arrests, 30.2% with multiple arrests; $\chi^2(df = 2) = 487.4$, $p < .001$).

Arrest Onset

DMH females were arrested at significantly younger ages than Non-DMH females ($M \pm$ SD; DMH 17.18 ± 3.00 vs. Non-DMH 18.71 ± 3.07 years; mean difference 95% CI:1.86-1.20 years, $t(df = 34{,}776) = -9.17$, $p < .001$). DMH females were at increased risk of first arrest at each age from age 13–19, compared to Non-DMH females, $\chi^2(\text{df} = 1) = 12.1\text{-}166.9$, $p < .001$, but were not significantly different at ages 2-24, $p > .10$ (see Figure 1).

Arrest Rate

Overall arrest rates (first arrest or later) were higher in the DMH than Non-DMH cohort at each age, $\chi^2(df = 1) = 52.87–249.82$, $p < .001$; see Figure 2. Arrest rates within DMH females were not significantly different from ages 15–23 (McNemar, $p > .05$). The arrest rate at age 13 was lower than at all other ages (McNemar, $p < .001$), age 14 arrest rates were significantly lower than those at ages 18 and 20, and the arrest rate at 24 was lower than that at 18–20 (McNemar, $p < .05$), there were no other significant differences in arrest rates by age (McNemar, $p > .10$). In Non-DMH females, arrest rates at 18–20 were not significantly different from each other (McNemar, $p > .10$), all other arrest rate paired comparisons were significantly different (McNemar, $p < .05$) except 17 and 23 (McNemar, $p > .10$).

Figure 1
Risk of 1st Arrest at Ages 13-24
Among Public Adolescent Mental Health System Females
(DMH Users), and Same Age non-DMH Involved Females

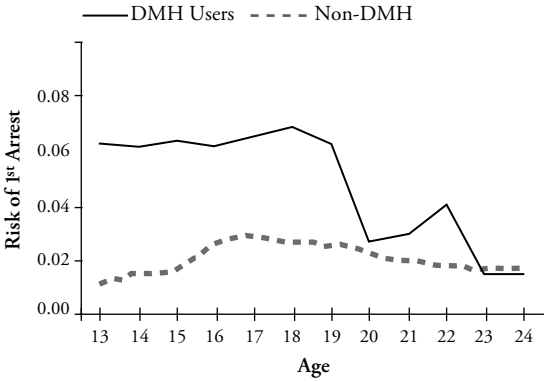
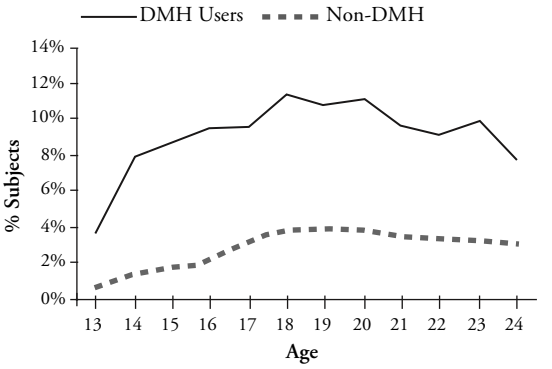


Figure 2
Arrest Rate Among Public Adolescent
Mental Health System-Involved Females (DMH Users),
and Same Age Non-DMH involved Females at Ages 13-24



Discussion

Summary

On each dimension examined, girls who were intensive adolescent public mental health system users had more concerning patterns of justice system involvement compared to same-age females not involved with the public mental health system. They were more likely to have been arrested, had multiple arrests, were younger at first arrest, had higher arrest onset rates up to age 19, and had higher arrest rates at each age between 13 and 24.

Conclusions

It is important to note that this study, overall, does not represent an outcome study for the female adolescent public mental health population. The study does not permit determination of which system girls were first involved with, thus, many of the girls may have been referred *to* the mental health system as a result of their juvenile system involvement.

This study does indicate that the risk of justice system involvement for DMH involved girls is elevated, compared to non-DMH involved girls, from adolescence into young adulthood. Further, their involvement is greater, as measured by the greater prevalence of multiple arrests. From this perspective it is clear that those offering intensive public mental health services to females should be aware of their greater risk of justice system involvement, and examine patterns of behavior that can lead to offending, such as substance use, for opportunities to reduce those high risk behaviors.

In addition, justice system involvement after age 18 does reflect outcomes for adolescent system users. The sustained elevation in arrest rates in this population from ages 19–23 suggests that supportive services continue to be needed during the early transition to adulthood. Taken in combination with the marked drop in arrest onset rates at these ages, it is likely that those at greatest risk of adult arrest have a previous arrest record. Further research is needed to determine risk factors that may identify girls at heightened risk of arrest throughout adolescence and young adulthood.

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Pathways to Desistance among Serious Juvenile Offenders and Mental Health Considerations

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Introduction

Previous longitudinal research indicates that offending behavior decreases as youth move into adulthood (e.g., Moffitt, 1993). Age-related desistance, however, is poorly understood because most previous research has focused on predicting the initiation of antisocial activity. In community samples, research suggests that substance use is a particularly pressing mental health problem that influences patterns of desistance and is associated with less decline in antisocial behavior over time. Unfortunately, little is known about the role of substance use on desistance among adolescents in the justice system, a group that shows rates of clinical substance use disorders as high as 50% (Grisso, 2004). In the present study, we explore the link between substance use disorders and trajectories of delinquent behavior for a

sample of serious male offenders during and beyond adolescence. Specifically, we distinguish between those who did and not meet diagnostic criteria for a substance use disorder the year prior to study enrollment and compare their offending trajectories through age 20. In comparing results across the two groups, we pay particular attention to how trajectories of antisocial behavior shift as individuals move into their early adult years.

Method

Male participants (*N* = 1,083) were drawn from the sample enrolled in the Pathways to Desistance study, an ongoing longitudinal investigation of adolescents who were adjudicated of a serious crime in Pennsylvania or Arizona. The average age at the baseline interview was 16.02 years (*SD* = 1.16) and participants came primarily from lower- to working-class families. Forty-nine percent were from Pennsylvania. Most (41%) were African-American, followed by Hispanic (35%) and Caucasian (20%). Youth completed a total of seven assessments (baseline session and follow-up interviews every six months for three years). To be included in the current analysis, individuals had to provide data about substance use at baseline and offending behavior for at least four of the seven assessments. Retention rates have been high, with youth completing approximately 92% of expected interviews through 36 months.

Substance Use Disorder. During the baseline interview, youth were asked about past-year substance use with the Composite International Diagnostic Interview (CIDI, World Health Organization, 1990), which identifies disorders based on DSM-IV criteria. For this study, youth were identified as having a substance use disorder if they met diagnostic criteria for Alcohol Abuse, Alcohol Dependence, Drug Abuse, or Drug Abuse Dependence.

Offending and exposure time. Offending was measured using items from the Self-Report of Offending (SRO; Huizinga, Esbensen, & Weiher, 1991) inventory. Offending was assessed as the count of 22 different delinquent acts endorsed during the previous six months. Research has demonstrated adequate reliability and validity for the SRO (alpha = .76). We also considered the amount of time individuals spent in the community (versus incarcerated) because previous research has demonstrated that this "community exposure" time can impact trajectories of offending (level of arrest rates among serious offenders are higher after accounting for the time spent in the community during the assessment period). In the current study, exposure time was represented by the following proportion score: number of days in community /number of days in recall period.

Results

Nagin's (1999) group-based method of modeling developmental trajectories was used to examine offending across 36 months. This method assumes that the population of interest is composed of a mixture of distinct groups defined by their developmental trajectories and uses longitudinal data to identify subgroups of individuals who display similar patterns of behavior over time; the analysis determines the number of groups that best fit the data and defines the shape of the trajectory for each group. Trajectory analyses were conducted using the zero-inflated Poisson (ZIP) model within the SAS PROC TRAJ program. The ZIP model is useful when there are more zeros than under the Poisson assumption, a scenario common in antisocial behavior that is typical in a small fraction of the population.

Three-hundred and ninety-eight (36.7%) offenders met diagnostic criteria for at least one substance use disorder assessed in this study; the remaining 63.3% (*N* = 685) made up the "no diagnosis" group. As noted earlier, trajectories of offending were examined separately for these two groups of offenders. Data about self-reported offending and exposure time (as a time-varying covariate) were used in the trajectory analyses. To model offending as a function of age, the data were restructured so that the each individual's scores were linked to his/her age at the time of the interview (and not the time point of the interview itself). In this way, youth who completed the baseline interview at age 16, for example, could contribute

seven data points for ages 16, 16.5, 17, 17.5, 18, 18.5, and 19. To ensure adequate information to construct the offending trajectories, we focused on data that described the developmental period between ages 15 to 20.

We assessed models that specified different numbers of trajectory groups and used the Bayes Information Criterion (BIC) to evaluate model fit; higher BIC scores reflect improvements in fit, with a maximum score often representing the best model. Analyses revealed that a four-group model was the best fit to the data for the "no diagnosis (dx)" group (BIC = -3692.66), and a three-group model was the best for the "diagnosis (dx)" group (BIC = -2870.67).

Figures 1 and 2 depict the offending trajectories for the two diagnostic groups. Among the *no dx* offenders (*N* = 685), one trajectory solution showed high levels of offending that decreased in early adulthood (high decliners, *N* = 40). Two other trajectory groups also showed declining patterns; one group started with moderate SRO scores (moderate decliners, *N* = 179) and the other started with low levels of offending (low decliners, *N* = 384). The final trajectory group showed a markedly different pattern of offending that increased over time and leveled off around age 18 (moderate increasers, *N* = 82).

Among the *dx* offenders (*N* = 398), one group showed high levels of offending that remained stable in early adulthood (high chronic, *N* = 52). Although this group showed declining levels of offending during mid-adolescence, these levels remained relatively high and stable during late adolescence and beyond age 18. The offending trajectories for the other two groups, however, declined over time. One group started with moderate SRO scores (moderate decliners, *N* = 170) and the other started with low levels of offending (low decliners, *N* = 176).

Figure 1
Delinquency Trajectories for Offenders without a Baseline Substance Use Dx (*N* = 685)

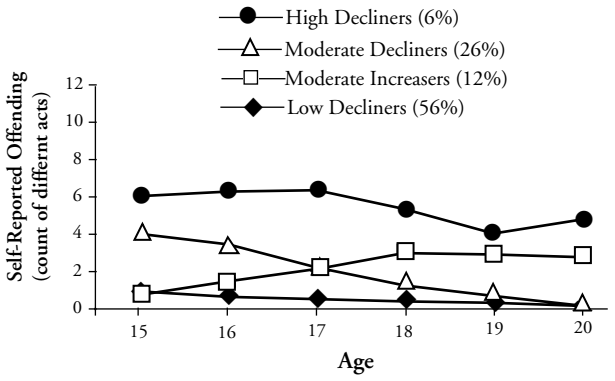
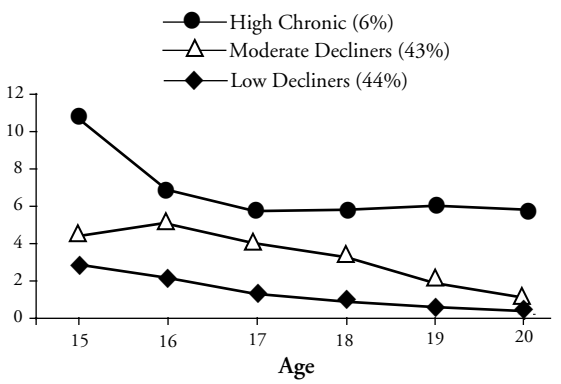


Figure 2
Delinquency Trajectories for Offenders with a Baseline Substance Use Dx (*N* = 389)



Discussion

This study found distinct offending trajectories among serious juvenile offenders during adolescence and early adulthood. Consistent with previous findings, offending trajectories showed general patterns of desistance beyond adolescence. Among offenders who entered the study with and without a diagnosable substance use disorder, most showed low to moderate levels of delinquent behavior that declined in early adulthood. The level of offending, however, was typically higher in the *dx* (versus *no dx*) trajectory groups.

Despite general age-related reductions in antisocial behavior, results indicated that a small proportion of offenders showed high levels of offending at the start of the study and through adolescence. Importantly, these youth showed different patterns of offending into adulthood depending on their substance use status at the time of enrollment. Specifically, it was only among the *no dx* offenders that

antisocial behavior began to decline in early adulthood. Offenders with a diagnosable substance use disorder showed very high initial rates of offending that remained relatively stable beyond age 18, a finding that suggests a particularly high-risk offending trajectory.

It is important to note that the current study assessed substance use diagnoses only at the baseline interview. As such, it is unclear whether symptoms varied over time and how this variation might have influenced offending trajectories into early adulthood. Future studies that examine the longitudinal covariation of substance use and antisocial outcomes could help to shed light on important processes that shape offending behavior beyond adolescence.

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Mental Health Services and Risk of Arrest among Young Adult Mental Health Services Recipients

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Introduction

There is a widely held view that the principal cause of criminal justice involvement among individuals with serious psychiatric disorders is the failure of mental health services to support their life in the community and to prevent them from engaging in activities that may lead to arrest. Indeed, the large financial and service system commitments made recently to develop jail diversion, mental health courts and re-entry services has had involvement or re-involvement of individuals in mental health services as the primary mechanism for preventing future justice system involvement. (Steadman, Deane, Morrissey et al., 1999). These efforts have focused chiefly on low-level misdemeanors, the "nuisance and subsistence" offenses which are largely associated with homelessness and the need to trespass or shoplift, or disorderly conduct resulting from inadequate treatment and connection with mental health services. Current data on the ability of such services, even those developed specifically for "forensically-involved" individuals, point to disappointing results (Morrissey, Piper & Cuddeback, 2007).

For young adults with serious psychiatric illnesses, such services are critical; persons between the ages of 18-25 fall squarely within the age bracket within which the risk for criminal justice involvement may be greatest. Unfortunately we know little, however, about how community-based services work with this age group. In this preliminary analysis we examine the effectiveness of two major service modalities, residential program involvement and case management, on re-offending among persons with serious mental illness who were part of a larger study of arrests among a cohort of individuals receiving services from the Massachusetts Department of Mental Health (DMH) in the period 1991 and 1992 and followed though late 2000. We view here one year's worth of data on the effects of residential program

involvement and case management on the likelihood of offending among those aged 18–25 in this time period. Our observations focus on a 12-month period (1992), which offers an opportunity to examine the effects of these generic services before the advent of jail diversion and other such services, which might affect this relationship. We test two general hypotheses:

- Persons receiving services will have lower likelihood of arrests.
- Effects will be strongest for low-level "nuisance" and "minor property" crimes, that is, for crimes which these services are principally designed to prevent.

Methods

Inclusion criteria

The inclusion criteria for our cohort were those used by the DMH to establish eligibility for services. These typically include an Axis I psychiatric illness and a history of inpatient treatment. Cohort members were individuals who had received either inpatient, residential or case management services between July 1, 1991 and June 30, 1992. Service use data were obtained from the DMH; arrest data were obtained from the Massachusetts Criminal Offender Record Information system.

Sample characteristics

The 18-25 segment of the cohort (N = 1,142) was 61.8% male, had a median age of 24, and was 29.4% non-Caucasian. Among this group, 16.5% received residential services and 45.1% were case managed.

Offense categories

Because of the diversity of charges observed in this cohort, categories were developed that would logically subsume them. "Nuisance Crimes" or "Crimes Against Public Order," included being a disorderly person, disturbing the peace, setting a false alarm, trespassing, and possession of an alcoholic beverage in a public place (i.e., "Open Container Law'). Minor Property Crimes included larceny of an item worth less than $500 (including shoplifting), receiving stolen property, welfare violations, driving uninsured motor vehicles or driving without a valid license, and prostitution.

Statistical analysis

Logistic regression was used to assess the effects of case management and residential services on (1) any arrest (Hypothesis 1), (2) at least one arrest on a "nuisance charge" and (3) at least one arrest for a minor property crime (Hypothesis 2) during the year services were received, adjusting for age, gender and race. Both service types were included in the equations, and thus each adjusts for the effects of the other.

Results

Overall offense rates

As reported elsewhere, (Fisher, Roy-Bujnowski, Grudzinskas et al, 2007) the 18-25 group had a 10 year prevalence of arrest of roughly 50%. This was substantially higher than for the cohort as a whole, whose rate was 29.7%. During 1992, 241 persons in this group (21%) had at least one arrest on any charge. Given that the prevalence of any arrest during the 10-year period was roughly 50% for those under 25 in 1992, these data indicate that nearly half of those who would be counted in that rate experienced their arrest during the first year of observation. Within this group, 78 (13.5%) were arrested at least once on one of the nuisance charges, and 66 (11.4%) were arrested at least once for a minor property charge.

Effects of services

Adjusted odds ratios representing the effects of for Case Management and Residential service receipt are shown in Table 1. As indicated, all *OR*s are below 1.00, but only one, measuring the effect

of receiving residential services on having any arraignment, was significant beyond the .05 level. Case management services had no effect on any of these outcomes. Thus, Hypothesis 1, which postulated a significant effect of these services on any arrest during the year services were provided was supported only with respect to residential services. Hypothesis 2, which speculated that these services would be effective in preventing misdemeanors, was not supported.

Table 1
Odds Ratios and 95% Confidence Intervals for Effects of Receiving Residential and Case Management Services in 1992 (Adjusted for Gender, Age and Race)

	Any Arrest		*Nuisance Crime*		*Minor Property*	
Variable	*OR*	*95% CI*	*OR*	*95% CI*	*OR*	*95% CI*
Case Management	.827	.597, 1.145	.756	.433, 1.318	.784	.427, 1.438
Residential Services	.518	.314, .856*	.662	.271, 1.619	.356	.102, 1.250

*Wald Chi-Square = 6.657, df = 1, p = .010

Conclusions

Many factors limit the inferences that can be made from these data. We assume that persons "on the books" as receiving services actually get them, but we cannot discern from these data whether individuals actually saw their case managers or stayed in their residential programs. We also cannot speak to the circumstances of arrest. Nonetheless, within these constraints, we can tentatively conclude that mental health services, particularly residential programs, are associated with reduction in offending. What drives the cases that diverge from the norm captured by these factors is a critical focus for future research guiding the design of services aimed at reducing criminal justice involvement among persons with severe psychiatric disorders.

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Symposium Discussion

Steven Banks

This session included three presentations examining the juvenile or criminal justice involvement of individuals during the transition to adulthood. The studies, though similar in many regards, had some important differences. The three studies used different measures of criminal justice involvement: official arrest, official charges, and self-report of offending. Two of the studies were gender specific; one examined only males, the other only females. Two of the studies used only administrative data, the third a longitudinal study relying on self-report. Two of the studies used trajectory models, assessing the impact of transition on criminal justice involvement. One study assessed the impact of specific public

mental health programs on criminal justice involvement, while another compared the experience of individuals in a public mental health system to that of the general population of the same age. Despite these differences, or potentially because of them, the session yielded a number of powerful observations. The studies revealed a variety of methods for studying individuals as they transition to adulthood. The studies demonstrated that youths transitioning to adulthood are heterogeneous in nature, highlighting sub-populations which need future study and the potential for the design of new interventions. Finally, the studies revealed both sub-populations of youths and potential services that may be associated with improving criminal justice outcomes.

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Impact of Mental Health Screening with the Massachusetts Youth Screening Instrument (MAYSI-2) in Juvenile Detention

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Introduction

Recent evidence suggests that the prevalence of mental health disorders among youth entering juvenile pretrial detention centers is two to three times higher than youths in the general population (Teplin, Abram, McClelland, Dulcan & Mericle, 2002). Within the past five years, mental health screening upon entry to a juvenile justice facility has become standard practice across the nation. We know more about the validity and reliability of mental health screening tools used in this context than we do about the factors that facilitate their implementation. If tools are not implemented properly, their adequate validity is virtually lost. Effective screening procedures require attention to how screening instruments are put into place and how they actually function within juvenile justice facilities. Introduced in 2000, the Massachusetts Youth Screening Instrument—Second Version (MAYSI-2; Grisso & Barnum, 2006) is now the most widely used mental health screening tool in juvenile justice secure facilities in the United States.

Method

We began a study in 2003 that focused on the uses and consequences of the MAYSI-2 in juvenile justice facilities. Data were collected using semi-structured interviews, focus groups and on-site observation. Respondents included administrators, managers and front-line staff at 17 juvenile detention centers in Pennsylvania and one each in Illinois and Arizona. These data were coded using an iterative, constant-comparative process to identify emerging themes and recurrent patterns. AnSWR, a code-and-retrieve software program, facilitated this analysis. This project addressed the following research questions:

- What factors influenced the rapid adoption of the MAYSI-2?
- What were the barriers to and facilitators of implementation?
- How is the MAYSI-2 actually being used in juvenile justice settings, and what are the variations in its use?
- What have been the consequences and outcomes of routine MAYSI-2 mental health screening, as perceived by juvenile detention professionals?

Results

Analyses identified several themes regarding administrators' and managers' stated reasons for adopting the MAYSI-2. Table 1 provides example quotes to represent the nature of responses that characterize each theme.

Adoption and Implementation

Many respondents reported being motivated to use the MAYSI-2 by both external pressures and self-imposed standards to improve the quality of their care for youths. Mental health screening data were often seen by administrators as having the potential to help them demonstrate the need for resources and mental health services that they did not have. Data gathered by the MAYSI-2 also were helpful for validating other sources of information. Some facilities already had intake procedures that used other methods to identify youths with special needs, but respondents reported that a standardized procedure with known validity would verify or crosscheck their efforts. Some facilities saw the MAYSI-2 as a potential way to maintain consistency and quality over time. Juvenile justice facilities, like many public

Table 1
Themes and Example Quotes from Administrators, Managers, and Front-line Staff related to the Adoption, Implementation and Perceived Consequences of Routine MAYSI-2 Mental Health Screening

Themes related to what first attracted respondents to the MAYSI-2 for mental health screening	
Doing a better job	• We wanted to catch kids who might otherwise slip through the cracks. • It's [using the MAYSI] a way to help staff be better at what they do.
Leveraging resources and services	• We knew the kids had mental health needs and…needed services but we needed numbers to show the situation.
Validating other sources of information	• We were hoping that it would validate what staff conducting intakes detect…and it does. • It really supports what we already know. It's an important check.
Maintaining quality over time	• We needed to have the continuity that the MAYSI would bring. [Our mental health service provider] is under contract. What if that contract is not renewed? • We need to keep something the same. It's important to have a test out there as a back up.
Themes related to barriers and resistances to adoption of MAYSI-2 mental health screening	
Lack of understanding	• They [staff] don't understand why they need to do it. They are resistant to it. • It's important to let staff know how important the MAYSI process is…It's not a hassle. It's a win-win.
Negative individual staff attitudes & perceptions	• We had a rough time…just convincing them to do it. Staff felt kids would not leave if we implemented the plan… • Our [staff] view the MAYSI as unnecessary paperwork and some see it as a chance for excuse making.
Limited staff	• A center needs to have enough staff so that things can get done right even when a lot of kids come in at once.
Themes related to facilitating implementation of MAYSI-2 mental health screening	
Policy must come before implementation	• Detention staff and the management team need to make sure their roles and responsibilities are clearly defined. • They need to think about how and when it's [screening] going to take place and what happens with the MAYSI-2 [scores].
Buy-in at all levels	• The MAYSI must be relevant to detention officers and probation officers. These are the front-line staff. It has to be a resource not an overhead expense. • It's a lot about relationship building and education.
Conducting a pilot	• I think trying it out got people motivated. Seeing it work made it more real. • I think people thought it would be harder than it is. Things worked better than we first thought. This really won them [staff] over.
Themes related to perceived consequences of MAYSI-2 mental health screening	
Staff perceptions of mental disorders among youths	• We noticed changes in staff attitudes….now staff view kids not as a problem but as a person with behavior problems. • We talk more about mental health issues day-to-day since the MAYSI.
Better communication with youth	• Kids that were never detained before don't know staff are there to help them until they see the questions on the MAYSI and see that it's okay to talk about these issues that happened. • It makes the contact easier.
Increased efficiency	• I think the most profound effect [of the MAYSI] has been on mental health providers. Kids get to them now. • We are more alert with the MAYSI and know if the mental health folks should be called right away. We don't have to wait and watch.

service institutions, are always in a state of change. Thus, a stable, enduring procedure for screening had appeal in this context.

Several themes emerged related to factors facilitating implementation of mental health screening. Respondents at all levels emphasized the importance of establishing policy before implementing screening. For example, policy issues that needed to be decided include: (a) having a clear rationale as to what it is that needs to be assessed, (b) understanding how scores are translated into decisions about youths, (c) knowing when screening will occur during the intake process, and (d) having clearly defined staff roles and responsibilities with regard to screening. Further, implementation was facilitated when there was buy-in at all levels, from top-level administrators to front-line staff. When time and effort were devoted to working through issues that concerned a variety of different interests, staff and administrators could better identify ways that screening would help them care for the youth in their facilities. With regard to use, implementation was facilitated by features of the MAYSI-2 (such as a short administration time and computer administration) that "made things easier" for all involved. Additionally, respondents reported that piloting the MAYSI-2 was very effective in reducing resistance and increasing motivation for its use.

However, there were some barriers to implementation. Several themes emerged related to barriers and resistance to implementation of the MAYSI-2 or mental health screening in general. A number of administrators noted that, initially, there was simply a lack of understanding on the part of staff or administrators regarding the potential value of mental health screening. Some facilities had to deal with negative staff attitudes and perceptions about taking on any new task or responsibility, or simply doubting the importance of the task. Other respondents at multiple levels reported that having too few staff to administer the MAYSI-2 posed a significant barrier to its implementation.

Variations in Use

We observed fairly wide variations across facilities with regard to several administration variables:

- ***Administration timing***. Various sites gave the MAYSI-2 within the first 6, 12, 24, or 48 hours after admission. Our evidence indicates that these variations do not influence the proportion of youths screened for further services. But delays in administration run risks of failing to identify potential crisis conditions for certain youths;
- ***Repeat administrations.*** Repetitive administrations of the MAYSI-2 can occur when youth are transferred from one facility to another and are re-administered the MAYSI-2. Youths' answers can change when they receive it repeatedly in a short period of time;
- ***Instructions to youth.*** Some facilities supply appropriate instructions about the purpose and use of the MAYSI-2 and some provide information that is extensive but somewhat inaccurate;
- ***Data and resource management.*** Some facilities and agencies use MAYSI-2 databases routinely to identify their needs for mental health referral. These efforts provide examples for new sites to follow in using MAYSI-2 data to lobby for resources;
- ***Availability of results to third parties***. Some centers have had to respond to efforts by third parties (e.g., probation, prosecutors) to obtain MAYSI-2 data for use in the adjudicative process and to defense attorneys who object to testing their clients.

Perceived Consequences

Our efforts to classify administrators, managers, and front-line staff's responses suggest three main categories of change. First, there were improved staff perceptions of mental disorders among youths. There is a general agreement that use of the MAYSI-2 has, in various ways, increased staff awareness of the relevance of mental health problems and has helped them understand youth behaviors. In turn, it also seems to have assisted staff in adjusting their own responses to these behaviors. Second, respondents reported better communication with youth. Many participants indicated that staff found out more about youths' feelings because youth were more forthcoming when answering MAYSI-2 questions on the computer than when staff asked mental health questions in person. Youth and staff seemed more

comfortable talking about a youth's feelings after youths expressed those feelings by answering the MAYSI-2 questions. Third, the MAYSI-2 increased efficiency. Administrators and staff often commented that the MAYSI-2 routine had a positive impact on a number of process variables during detention, such as a decrease in "chaos" associated with the intake process, and greater efficiency and speed in acquiring assessments after screening.

Conclusions and Recommendations

Findings suggest the following recommendations regarding mental health screening at intake to juvenile detention. Policies that discourage repetitive administration of the mental health screening tool (e.g., more than twice per month) should be developed. In most cases, the previous placement will know of the youth's special mental health needs and can or should inform the receiving facility about them. For example this would put the new facility on alert regarding past suicide risk status, as many detention centers would want to reinstate this status upon a youth's movement to a new setting.

In addition, a standard set of instructions should be used when introducing youth to the mental health screening tool. It is important that the introduction be done in a uniform way that engages youth in the task, is straightforward and factual about why they are being asked to participate in screening, and respectful of their choice if they decline participation. A good introduction should also include a clear description of how the results will and will not be used. This will differ somewhat from one program to another, depending upon the program's policies for uses of screening results.

Finally, policy and practice should be developed to assure legally and clinically appropriate uses of mental health screening data. There should be established protections regarding the use of mental health screening data, as these may become evidence in hearings or trials related to adjudication or disposition of the youth's charges. An agreement also should be developed regarding the release of mental health screening results to probation officers at the pretrial stage of youths' cases.

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Juvenile Justice Outcomes: Measuring Success in a System of Care

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Introduction

Youth in the juvenile justice system experience serious emotional disturbances at a higher rate than youth in the general population (Cocozza & Skowyra, 2000). Impairment associated with these disturbances affects youth functioning in a variety of life domains including home, school, and the community. In an effort to provide effective services that maximize available resources, collaborative approaches have emerged for youth whose service needs often extend beyond the boundaries of any one child-serving system. Using a wraparound approach (Burns & Goldman, 1999) to guide service delivery and a pooled funding business model, Hamilton Choices (HC) provides a framework for this cross-system collaborative approach.

To date, research and evaluation efforts to examine the effectiveness of services for juvenile justice-involved youth who are served in a system of care have been limited. Although systems of care have been cited as model programs for multi-system youth (New Freedom Commission on Mental Health, 2003) and positive benefits for participating youth have been found (Kutash, Duchnowski & Friedman, 2005), the literature is relatively modest with respect to evaluating clinical outcomes and costs associated with this model. This study uses a three-pronged approach to answer questions about juvenile justice-involved youth served in a system of care. Specific areas of inquiry include: decreased juvenile justice involvement as measured by the type and frequency of adjudications, overall functioning as measured by the Child and Adolescent Functional Assessment Scale (CAFAS; Hodges, 2000) change scores, and average service expenditures per enrollment day.

Purpose

The purpose of this study was to examine the success of youth referred to HC by the juvenile justice system. This success was defined clinically as decreased involvement with the juvenile justice system and improved functioning. Also of interest was the degree to which the program could affect service expenditures during the same time in which clinical outcomes were measured. The following questions served to guide the study.

- Do youth referred by the juvenile justice system who receive services from HC evidence decreased juvenile justice involvement during program participation?
- What changes in functioning are observed for these same youth?
- What is the pattern of service expenditures for these youth across the period of measurement?

Method

Decreased Involvement

Beginning in July 2004, newly referred Juvenile Court youth as well as existing Juvenile Court youth with open case status at the time were classified by Juvenile Court personnel into one of three categories (felon, misdemeanant, or status offender). These classifications were determined following a thorough review of both the type and frequency of prior adjudications.

In addition to the classifications listed above, Juvenile Court and HC personnel developed a detailed set of business rules that used the type and frequency of new adjudications within a defined period (three months) to classify each youth in the following manner: (a) Marked improvement, (b) Improvement, (c) No change, (d) Decline, and (e) Marked decline.

Classified youth who had completed their enrollment in HC (N = 77) were assigned a maximum ordinal month based on their length of stay in HC. An ordinal month strategy was used to group

subjects based on program exposure. This allows for later analyses that specifically address the question of dosage as it relates to outcomes. Adjudications were then assigned to the ordinal quarter in which they occurred and the business rules applied to determine improvement or decline for each quarter.

Once a score was calculated for each ordinal quarter, a weighting system was applied that accounted for the days youth spent in the community during the period reviewed. As days in community is central to the calculation of a final improved/declined score, this strategy helped control for false positives that could be attained when decreased criminal activity was due to periods of residential treatment. The assumption was made that youth in residential treatment had less opportunity to accrue new charges, and thus good scores during those periods should count less than scores for youth in the community.

Final weighted scores were rounded to the nearest whole number (1-5) and used to report the status of youth at program discharge. Results were then compared against case reviews of each youth to help verify findings and ensure that the method accurately reflected the experiences of the youth analyzed from the perspective of Juvenile Court personnel.

Improved Functioning

The second question relating to changes in youth functioning was addressed using the eight CAFAS subscales scores; analyses included comparisons at enrollment and discharge of average CAFAS scores as well as the percent of youth who moved from severe impairment ratings to moderate or below. Higher scores on the CAFAS indicate lower levels of functioning. Paired-sample *t*-tests were used to to compare changes in means and to statistically test for meaningful results.

Decreased Service Expenditures

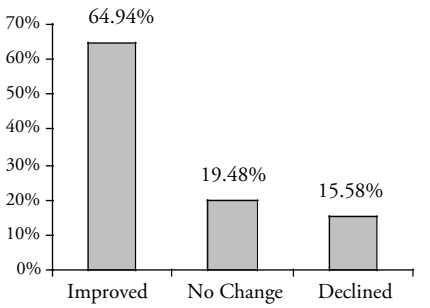
This final tier of analysis used the same ordinal month strategy previously mentioned to assign service expenditures (not including Medicaid) to specific ordinal quarters. HC uses a case rate reimbursement system and is paid a contractually established case rate for each day of youth enrollment. Quarterly service expenditures were analyzed in relation to the number of enrollment days (E days) for the youth in each ordinal quarter. Enrollment days were adjusted to account for periods when youth were either AWOL, in juvenile detention, or in a hospital setting. Typically, Choices is not responsible for expenditures associated with these placements and to include them could have artificially lowered the average expenditures per E day.

Findings

Juvenile Justice Involvement and Improved Functioning

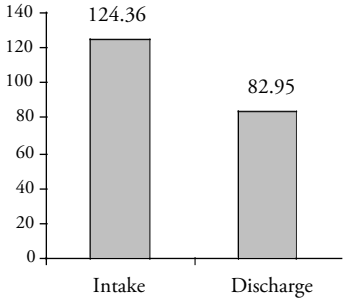
Results from the first analysis show that nearly 65% of juvenile court involved youth served by HC evidenced improvement or decreased involvement with the juvenile justice system during their enrollment (see Figure 1).

Figure 1
Juvenile Justice Outcomes for Discharged Youth



The second analysis examined the change in overall functioning between enrollment and discharge using the CAFAS. Using SPSS software (SPSS, 2002), statistically significant decreases in CAFAS scores, that reflect an increase in functioning were observed between enrollment (M = 124.36, SD = 37.02) and discharge (M = 82.95, SD = 56.29), $t(77) = 3.439$, $p < .01$ (see Figure 2).

Figure 2
CAFAS Change for Juvenile Justice Involved Youth
***N* = 78 Disenrollements**



Favorable results in the percent of youth who move from severe levels of impairment (N = 62) to moderate and mild (N = 30) were also observed between enrollment and discharge.

These combined results give greater confidence to the business rules methodology as a viable option for measuring outcomes for juvenile justice involved youth, with results used to inform ongoing program improvement.

Average Service Expenditures per Enrollment Day (E Day)

The final level of evaluation examined average service expenditures per E day for juvenile justice-involved youth and shows favorable decreases over time. As service dosage increases, expenditures per E day decrease. Results indicate that between the first and third ordinal quarters, average expenditures per E day are reduced from $148 to $98 per day. While this result is clearly important to business operations locally, it also addresses the need to integrate clinical outcome data with cost data in the evaluation of effective systems of care (Kutash, et al. 2005; Rosenblatt, 2005).

Conclusion

Internal questions surrounding outcomes for juvenile justice involved youth served in a system of care as well as questions from the juvenile justice referral source provided momentum for this study. As one of five funders, juvenile justice officials had an interest in better understanding outcomes for youth referred to HC. The methods used in this study were the product of an 18-month collaboration between Juvenile Court personnel, project funding partners, and HC evaluation staff. Through this on-going process, the method and subsequent results were tested against actual case records and verified by Court personnel. Results from this study have helped inform local decision-making and can provide a blueprint for on-going evaluation in this critical area both locally and within other systems of care.

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