

A Statewide Collaboration to Initiate Mental Health Screening and Assess Services for Detained Youths in Indiana

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On any given day, nearly 100 000 youths are held in detention centers across the United States.¹ Although reported estimates vary, researchers find that detained adolescents exhibit mental health problems at significantly higher rates than the general adolescent population.¹⁻⁴ Prevalence studies indicate that a majority of detained youths (60%–70%) meet the criteria for a diagnosable mental health disorder.^{5,6} Over the past decade, researchers and practitioners have called for systematic ways to reliably identify and treat detained youths in need of mental health services.⁷⁻¹⁰ We describe statewide efforts to improve the mental health of Indiana's detained youths—adopting a standard mental health screening process and tracking the detention-based follow-up mental health services and referrals offered to screened youths.

IDENTIFYING MENTAL HEALTH ISSUES OF DETAINED YOUTHS THROUGH SCREENING

More than 30 states have begun to address the disproportionately poor mental health of detained youths by routinely administering the Massachusetts Youth Screening Instrument (the MAYSI-2¹¹) within detention centers.⁵ The MAYSI-2 is a validated mental health screening tool to be used within 24 to 48 hours of a youth's arrival at a detention facility. The MAYSI-2 is not intended for use as a diagnostic tool or as the basis for a long-term mental health treatment plan. Instead, this brief, self-report instrument is designed to alert facility staff that a youth is exhibiting clinical symptoms requiring follow-up mental health services (e.g., a psychological assessment by a trained clinician).¹¹

In an early study of the MAYSI-2, funded by the Pennsylvania Commission on Crime and Delinquency (the Pennsylvania Project), 15 of the 23 juvenile detention centers in Pennsylvania employed the MAYSI-2 to screen 18 607 youths' admissions over a 2-year period. Study findings reconfirmed the high rates of mental

Objectives. We describe a statewide effort to implement detention-based mental health screening and assess follow-up services offered to detained youths in Indiana.

Methods. A total of 25 265 detention stays (15 461 unique youths) occurred between January 1, 2008, and December 31, 2011, across 16 detention centers participating in the Indiana Juvenile Mental Health Screening Project. We collected screening results and reports of detention-based follow-up mental health services and referrals from justice system records.

Results. Approximately 21% of youths screened positive for mental health issues requiring follow-up. A positive screen significantly predicted that youths would receive a follow-up mental health service or referral while detained or upon detention center discharge, compared with youths who did not screen positive (61% vs 39%). Logistic regression models indicated that a positive screen was associated with (1) contact with a mental health clinician within 24 hours of detention center intake and (2) a mental health referral upon discharge. White youths were more likely than minorities to receive both follow-up services.

Conclusions. Future statewide efforts to improve the mental health of detained youths should incorporate standards for providing appropriate follow-up services in detention centers. (*Am J Public Health.* 2014;104:e82–e88. doi:10.2105/AJPH.2014.302054)

health issues among juvenile detainees: 81% of female detainees and 70% of male detainees scored in the clinically significant “caution range” on 1 or more of the MAYSI-2 subscales.^{9,12} Results from the Pennsylvania Project also indicated that use of a mental health screener helped improve juvenile detention center operations. After implementation of the MAYSI-2, staff members at participating sites reported improvements in their own awareness of youths' mental health needs, overall staff communication with youths, and efficient use of mental health service resources. In a comparison of rates before and after MAYSI-2 implementation, results from a more recent study showed an increase in the frequency with which detention center staff made efforts to obtain mental health services for youths.¹³

MENTAL HEALTH SERVICES OFFERED TO DETAINED YOUTHS

Few comprehensive studies report the type or quality of mental health services available to

detained youths, and even less is known about juvenile offenders' access to such services during a detention stay.^{2,14} To date, the largest related reports include a national survey of 984 facilities conducted in 1991 by the Office of Juvenile Justice and Delinquency Prevention¹⁵ and another national survey of 2798 juvenile facilities conducted in 1998 by the Center for Mental Health Services.¹⁶ These studies, now more than a decade old, estimate that more than 75% of detained youths were housed in facilities that reported offering some type of mental health counseling, broadly defined. Information regarding the quality of, practical access to, and use of offered services was not reported.

More recent studies of mental health services in juvenile detention centers, though limited in size and scope, have suggested that detained youths do not receive appropriate services.¹⁴ For example, a survey of 83 juvenile detention facilities reported that mental health treatment options primarily consisted of medication administration and management.

In addition, only 68% of these facilities reported offering counseling services, which were rarely provided by licensed mental health care professionals.¹⁷

Limited access to mental health services in detention may be most pronounced for minority youths, who are disproportionately represented among juvenile detainees.^{18,19} Although evidence suggests that subjective decision-making processes within the justice system (e.g., determination of guilt, sentencing recommendations) may induce racial disparity in related outcomes,²⁰ little is known about possible racial disparity in youths receiving mental health services in juvenile detention.

THE INDIANA JUVENILE MENTAL HEALTH SCREENING PROJECT

By expanding on the design and goals of the Pennsylvania Project in Indiana, we initiated the Indiana Juvenile Mental Health Screening Project (the Indiana Project) to (1) implement a statewide mental health screening program in Indiana juvenile detention centers, (2) assess the mental health needs of Indiana's detained youths, and (3) describe any postscreening, follow-up mental health services or referrals received by detained youths.

The Indiana Project also sought to investigate how youths' demographic characteristics (e.g., age, gender, and race/ethnicity) may influence their access to mental health services in detention.

METHODS

The Indiana Project stemmed from collaborative efforts among the Indiana Criminal Justice Institute, the Indiana State Bar Association, and other community members. On January 1, 2008, the Indiana Project began under the supervision of an advisory board, an interdisciplinary group including judges, lawyers, detention center superintendents, mental health professionals, and representatives from local universities, the community, and government agencies (e.g., Department of Mental Health and Addictions, Department of Child Services).

We have recruited Indiana Project sites on a rolling basis, expanding site participation from 6 to 16 of Indiana's 22 detention centers

over the study period from January 1, 2008, to December 31, 2011. The sites include both small rural communities and larger urban centers. The customs and available resources of participating sites vary significantly, improving the generalizability of our findings. (Per a confidentiality agreement with all detention center sites, we will not report data that may identify an individual detention center's participation in the Indiana Project.)

Careful collaboration ensured the use of standardized protocols for data collection and reporting, allowing us to make direct comparisons among detention centers. A project coordinator visited each of the sites to explain the importance of consistent screening, data collection, and data reporting procedures. We held quarterly meetings, during which we addressed data-related issues.

All 16 participating sites provided MAYSI-2 screening results for the current analysis, and 8 of these centers were equipped with electronic record systems and sufficient staffing to provide information about the detention-based follow-up mental health services and referrals offered to youths. We collected all available data monthly from the participating sites, and the advisory board reviewed the data bi-monthly. Data included MAYSI-2 scores and demographic information from all 16 sites and rates of follow-up service utilization and referrals from only 8 of 16 sites. The number of months during the study period for which data were provided varied by site.

Mental Health Screening Process and Study Measures

Upon determination that a youth would be detained, he or she completed the MAYSI-2. The 52 MAYSI-2 items (requiring "yes" or "no" responses) assess potential mental health problems in 7 areas: alcohol or drug use, anger or irritability, depression or anxiety, somatic complaints, suicide ideation, thought disturbance, and traumatic experiences (subscales with good internal consistency; Cronbach α 0.61–0.86). This measure has been normed with a national sample of detained youths, has moderate test–retest reliability (from 0.60 for suicide ideation to 0.82 for thought disturbance), and has appropriate concurrent validity. The caution and warning cutoff scores have good specificity, but variable sensitivity

(ranging from 0.17 for alcohol or drug use to 0.90 for suicide ideation).²¹

Greater MAYSI-2 subscale scores, or scores reaching a "caution range" (predefined per each subscale), indicate a clinically significant mental health issue; scores reaching the "warning range" are above the 90th percentile.¹¹

For the Indiana Project, a youth "screened positive" for mental health issues requiring detention center staff action if his or her score on the suicide ideation subscale reached the caution range, or if 2 or more subscale scores reached the warning range. A positive screen alerted staff that the youth needed follow-up mental health services (e.g., a formal psychological assessment, a visit with a mental health professional, or placement on suicide or behavioral precaution).

Detention center staff gathered demographic information and results of the MAYSI-2 screening from each youth at detention center intake. Through electronic or paper chart review, site coordinators collected information regarding any follow-up mental health services, including referrals for services, offered to each adolescent during, and upon discharge from, detention.

1. *Demographic information.* At intake, youths reported gender, age, and self-identified race/ethnicity (i.e., White, African American, Hispanic, Asian, or other). Demographics are reported based on records from an adolescent's first detention stay within the study period.
2. *Follow-up mental health services in detention.* Site coordinators recorded several items while the youths were detained. Each required a response of "yes" or "no" from site coordinators.
 - a. Court-ordered assessment in detention: Was a psychological assessment ordered by the juvenile court to take place while the youth was detained?
 - b. Contact with mental health clinician within 24 hours: Did the youth have contact with a master's degree-level mental health clinician within 24 hours of intake?
 - c. Behavioral precaution: Was the youth placed on behavioral precaution because of aggressive or problematic behavior at intake?

TABLE 1—Mean Massachusetts Youth Screening Instrument-2 Subscale Scores and Percentage of Positive Screens by Youths' Gender and Race: Indiana Juvenile Mental Health Screening Project, 2008–2011

Variables	Alcohol or Drug Use		Angry or Irritable		Depressed or Anxious		Somatic Complaints		Suicide Ideation		Thought Disturbances		Traumatic Experiences		Screened Positive No. (%)
	Score 0–8 (SD)	P	Score 0–9 (SD)	P	Score 0–9 (SD)	P	Score 0–6 (SD)	P	Score 0–5 (SD)	P	Score 0–5 (SD)	P	Score 0–5 (SD)	P	
Total (n = 24 717)	1.77 (0.01)		3.64 (0.02)		2.02 (0.01)		2.51 (0.01)		0.63 (0.01)		0.52 (0.01)		1.62 (0.01)		5222 (21.1)
Male (n = 19 291)	1.76 (0.02)	<.001	3.44 (0.02)	<.001	1.82 (0.01)	.005	2.33 (0.01)	<.001	0.52 (0.01)	<.001	0.50 (0.01)	.036	1.58 (0.01)	<.001	3439 (17.8)
African American (n = 8644)	1.27 (0.02)		3.43 (0.03)		1.87 (0.02)		2.10 (0.02)		0.45 (0.01)		0.53 (0.01)		1.63 (0.02)		1344 (15.6)
Hispanic (n = 1916)	1.59 (0.05)		2.68 (0.06)		1.58 (0.04)		2.07 (0.04)		0.39 (0.02)		0.43 (0.02)		1.38 (0.03)		252 (13.1)
White (n = 8731)	2.29 (0.03)		3.62 (0.03)		1.83 (0.02)		2.60 (0.02)		0.61 (0.01)		0.48 (0.01)		1.57 (0.02)		1843 (21.1)
Female (n = 5426)	1.79 (0.03)	<.001	4.33 (0.04)	.295	2.72 (0.03)	.301	3.15 (0.03)	<.001	1.04 (0.02)	.001	0.62 (0.01)	.787	1.76 (0.02)	<.001	1783 (32.9)
African American (n = 1880)	1.07 (0.04)		4.39 (0.07)		2.75 (0.06)		2.70 (0.04)		0.91 (0.04)		0.61 (0.02)		1.67 (0.03)		522 (29.4)
Hispanic (n = 473)	1.41 (0.10)		3.89 (0.13)		2.37 (0.10)		2.99 (0.09)		0.83 (0.07)		0.54 (0.04)		1.55 (0.07)		123 (26.0)
White (n = 3073)	2.29 (0.04)		4.37 (0.05)		2.76 (0.04)		3.45 (0.04)		1.16 (0.03)		0.63 (0.02)		1.84 (0.03)		1108 (36.1)

Note. Asian and "other" race/ethnicity youths not included because of low base rates.

- d. Suicide precaution: Was the youth placed on suicide precaution because of suicide ideation or suicidal behavior at intake?
 - e. Mental health services in detention: Were mental health services, broadly defined, received by the youth during detention?
3. Follow-up mental health services upon discharge. Site coordinators assessed several items upon a youth's discharge from the detention center.
- a. Mental health referral: Was a referral for mental health services made for the youth upon discharge?
 - b. Court-ordered assessment in community: Was a psychological assessment ordered by the juvenile court upon discharge?
 - c. Family recommendations: Did detention staff members relay mental health service recommendations, spoken or written, to caregivers upon discharge?

Analysis

We performed all analyses with SAS version 9.2 (SAS Institute, Cary, NC). We generated χ^2 s to test for differences in MAYSI-2 subscale scores by race/ethnicity and gender. We employed a mixed-effects logistic regression to assess predictors of 2 commonly received follow-up mental health services: one occurring in detention facilities (i.e., contact with a master's degree-level mental health clinician within 24 hours of intake) and another occurring upon a youth's discharge from detention (i.e., a mental health referral).

We entered a random effect for youths into the model to account for within-participant correlation across multiple detention stays, specifying that multiple MAYSI-2 scores for any one youth are correlated, whereas scores from different youths are independent.

RESULTS

We captured a total of 25 265 detention stays occurring across the Indiana Project's 16 detention centers, which each provided at least 1 month of data between January 1, 2008, and December 31, 2011. These stays included 15 461 unique individuals. The

number of detention stays per youth ranged from 1 to 12 (mean = 1.6; median = 1.0). The number of youths representing any single detention center ranged from 30 to 4553 individuals. The majority of Indiana Project detainees were male youths (76.3%). The proportion of male detained youths varied by site from 63% to 86%. The average age of screened youths was 15.6 years for male detainees and 15.5 years for female detainees. The vast majority of detained youths identified as White (50.5%), African American (38.2%), or Hispanic (9.1%). Among the 16 sites, the proportion of detained youths identifying as White ranged from 23% to 95%. Because of the low base rates of youths identifying as Asian (0.2%) or of another race (2.0%), we excluded these youths from all reported analyses.

Screening Results

Overall, 70.3% of screened youths scored in the caution or warning ranges on any individual MAYSI-2 subscale, which is comparable to findings from the Pennsylvania Project. Female detainees (79.5%) were more likely than male detainees (67.7%) to score within the caution or warning ranges. Differences in MAYSI-2 subscale scores by youths' gender and race/ethnicity are presented in Table 1. White and Hispanic male and female

detainees scored higher on the alcohol and drug use subscale than African American youths. For the remaining subscales, Hispanic male and female youths scored lower than African American and White youths, although African American female youths scored lower on the somatic complaints subscale than other female youths.

Twenty-one percent of all youths who completed the MAYSI-2 screened positive for mental health issues (Table 1). Again, a positive screen on the MAYSI-2 occurred if at least 2 subscale scores reached the warning range or if the suicide ideation subscale score reached the caution range. Among the 16 sites, the proportion of detained youths who screened positive on the MAYSI-2 varied from 12.3% to 41%. Female detainees were more likely to screen positive than were male detainees (32.9% vs 17.8%). When we broke out MAYSI-2 scores by race/ethnicity of the screened youths, White youths were more likely to screen positive (25.0%) than were African American (18.0%) or Hispanic youths (15.7%; $P < .001$).

Follow-Up Mental Health Services and Referrals

A total of 15 708 detention stays occurred in the 8 sites that reported data on follow-up

mental health services and referrals, totaling 9043 unique youths. The number of stays per youth ranged from 1 to 12 (mean 1.7; median 1.0). Youth detained in centers reporting these data exhibited significantly lower rates of positive MAYSI-2 screens than those in detention centers not reporting data on follow-up mental health services and referrals (18.9% vs 24.7%; $P < .001$). Similarly, sites reporting data on follow-up services included significantly higher proportions of female (27.3% vs 18.7%; $P < .001$) and White (59.4% vs 37.9%; $P < .001$) detained youths than sites not reporting these data.

Overall, 43.5% of all youths received some type of follow-up mental health services (Table 2). A positive screen on the MAYSI-2 significantly predicted that a youth would receive some type of follow-up mental health service or referral while detained, or upon discharge from the detention center, compared with youths who screened negative (61.4% vs 39%). Youths who screened positive on the MAYSI-2 were more likely to receive all types of follow-up mental health services, with 1 exception; a positive screen was not predictive of court-ordered assessments to take place in the community.

A comparison of a youth's screening status, gender, and race by type of follow-up service

TABLE 2—Number and Percentage of Youths Who Received Detention-Based Follow-Up Mental Health Services or Referrals: Indiana Juvenile Mental Health Screening Project, 2008–2011

Variables	Positive Screens (n = 2967), No. (%)	Negative Screens (n = 12 741), No. (%)	All MAYSI-2 Screens (n = 15 708), No. (%)	P
Follow-up mental health services in detention				
Court-ordered assessment in detention ^a	69 (2.3)	73 (0.6)	142 (0.9)	< .001
Contact with mental health clinician within 24 hours of intake	934 (31.5)	530 (4.2)	1464 (9.3)	< .001
Placed on behavioral precaution ^b	485 (16.4)	784 (6.2)	1269 (8.1)	< .001
Placed on suicide precaution ^b	743 (25.0)	579 (4.5)	1322 (8.4)	< .001
Mental health services in detention ^c	905 (30.5)	1695 (13.3)	2600 (16.6)	< .001
Follow-up mental health services upon discharge				
Mental health referral	817 (27.5)	2261 (17.8)	3078 (19.6)	< .001
Court-ordered assessment in community ^a	154 (5.2)	872 (6.8)	1026 (6.5)	.08
Family recommendations given	646 (21.8)	1169 (9.2)	1815 (11.6)	< .001
Any follow-up mental health service	1821 (61.4)	5007 (39.3)	6828 (43.5)	

Note. MAYSI = Massachusetts Youth Screening Instrument. The sample size was n = 9043 youths, representing 15 708 detention stays.

^aExcluded 2 counties that did not provide court-ordered assessments in either detention or community.

^bExcluded 2 counties that did not differentiate between types of precaution.

^cExcluded 1 county that did not offer mental health services in detention.

TABLE 3—Odds of Youths Receiving Follow-Up Mental Health Services, Results of a Mixed-Effects Logistic Regression Analysis: Indiana Juvenile Mental Health Screening Project, 2008–2011

Variable	Contact With Mental Health Clinician Within 24 Hours of Detention Center Intake, OR (95% CI)		Mental Health Referral Upon Detention Center Discharge OR (95% CI)	
Positive MAYSI-2 screen	12.19*** (10.70, 13.90)		2.38*** (2.12, 2.67)	
Age	0.96 (0.92, 1.00)		0.84*** (0.81, 0.87)	
Female	1.40*** (1.23, 1.60)		1.00 (0.90, 1.12)	
Race/ethnicity				
African American	0.77** (0.65, 0.91)		0.66*** (0.59, 0.75)	
Hispanic	0.72** (0.57, 0.90)		0.87*** (0.75, 1.01)	
White (Ref)	1.00		1.00	
Detention center site				
1	2.46*** (1.76, 3.42)		0.05*** (0.03, 0.07)	
2	0.93*** (0.68, 1.26)		0.00*** (0.00, 0.01)	
3	2.54*** (1.80, 3.58)		0.84*** (0.69, 1.04)	
4	3.71*** (2.79, 4.93)		1.62*** (1.39, 1.90)	
5	4.11*** (3.10, 5.44)		1.05*** (0.91, 1.22)	
6	0.29*** (0.14, 0.60)		0.23*** (0.17, 0.33)	
7	0.15*** (0.04, 0.64)		0.57*** (0.38, 0.87)	
8 (Ref)	1.00		1.00	

Note. CI = confidence interval; MAYSI = Massachusetts Youth Screening Instrument; OR = odds ratio. The sample size was n = 9043 youths, representing 15 708 detention stays.
*P < .05; **P < .01; ***P < .001.

youth's race/ethnicity and age on the likelihood that (1) the youth received contact with a master's degree–level mental health clinician within 24 hours of detention center intake and (2) that the youth received a mental health referral at detention center discharge (Table 3). For both of these follow-up mental health services, a positive screen on the MAYSI-2 was associated with an increased likelihood of youths receiving the service. African American and Hispanic youths were less likely than White youths to receive either mental health service. As youths' age increased, the likelihood of receiving either of these services decreased. Finally, female youths were more likely than male youths to receive contact with a master's degree–level mental health clinician within 24 hours of intake. There was no difference between genders in rates of referral for mental health services upon discharge.

Because African American and Hispanic youths were less likely to both screen positive on the MAYSI-2 and to receive mental health services or referrals, we conducted a second set of mixed-effects logistic regression analyses, stratified by the MAYSI-2 screening status of the youths. In this way, we attempted to account for race/ethnicity differences in need for follow-up mental

or referral received (Table A, available as a supplement to the online version of this article at <http://www.ajph.org>) justified

conducting mixed effects logistic regression analyses assessing the impact of MAYSI-2 screening status, detention center site, and

TABLE 4—Odds of Youths Receiving Follow-Up Mental Health Services by Massachusetts Youth Screening Instrument-2 Screening Status, Results of a Mixed-Effects Logistic Regression Analysis: Indiana Juvenile Mental Health Screening Project, 2008–2011

Variable	Contact With Mental Health Clinician Within 24 Hours of Detention Center Intake		Mental Health Referral Upon Detention Center Discharge	
	Screened Negative, OR (95% CI)	Screened Positive, OR (95% CI)	Screened Negative, OR (95% CI)	Screened Positive, OR (95% CI)
Age	0.69*** (0.59, 0.81)	0.97 (0.91, 1.03)	0.81*** (0.78, 0.85)	0.93 (0.87, 1.00)
Female	2.07** (1.22, 3.52)	1.21* (1.00, 1.45)	0.99 (0.87, 1.13)	1.09 (0.89, 1.34)
Race/ethnicity				
African American	0.35** (0.18, 0.67)	0.92 (0.72, 1.18)	0.63*** (0.55, 0.73)	0.80 (0.60, 1.05)
Hispanic	0.33** (0.14, 0.80)	0.93 (0.65, 1.33)	0.87*** (0.74, 1.03)	0.85 (0.59, 1.24)
White (Ref)	1.00	1.00	1.00	1.00
Detention center site				
1	22.07* (2.45, 198.74)	0.48*** (0.30, 0.79)	0.02*** (0.01, 0.05)	0.12*** (0.07, 0.23)
2	2.71* (0.28, 26.71)	0.70*** (0.49, 1.01)	0.00*** (0.00, 0.01)	0.01*** (0.00, 0.03)
3	12.42* (1.27, 121.26)	1.18*** (0.75, 1.85)	0.81*** (0.65, 1.02)	1.19*** (0.78, 1.81)
4	13.07* (1.54, 110.80)	2.34*** (1.62, 3.37)	1.20*** (1.01, 1.43)	4.88*** (3.47, 6.87)
5	8.30* (0.97, 70.76)	6.46*** (4.34, 9.60)	0.94*** (0.80, 1.10)	1.71*** (1.21, 2.42)
6	4.01* (0.20, 81.36)	0.12*** (0.04, 0.34)	0.20*** (0.13, 0.30)	0.44*** (0.25, 0.80)
7	0.03* (0.00, > 999)	0.14*** (0.03, 0.62)	0.70*** (0.43, 1.13)	0.53*** (0.24, 1.17)
8 (Ref)	1.00	1.00	1.00	1.00

Note. CI = confidence interval; OR = odds ratio. The sample size was n = 9043 youths, representing 15 708 detention stays.
*P < .05; **P < .01; ***P < .001.

health services (Table 4). For youths who screened positive on the MAYSI-2, the likelihood that youths received either a mental health service or referral did not differ by the youths' race/ethnicity. In contrast, among those who screened negative, White youths were significantly more likely to receive a mental health service or referral than were African American and Hispanic youths.

DISCUSSION

The Indiana Project demonstrates that the mental health care needs of detained youths in Indiana are significant; more than 70% scored in caution or warning ranges on a MAYSI-2 subscale, and more than 20% of all screens were positive, indicating a need for detention-based follow-up mental health services and referrals.

According to results of the first set of mixed effects logistic regressions (Table 3), the strongest predictor of a youth receiving contact with a master's degree-level mental health clinician within 24 hours of detention center intake, or a mental health referral upon detention center discharge, was a positive mental health screen. However, the role of a positive screen was much more significant for timely contact with a mental health clinician during detention than for a mental health referral upon detention release (odds ratio = 12.19 vs 2.38, respectively; $P < .001$). As such, the influence of a positive mental health screen on receiving services may be time-limited.

In contrast to the influence of a positive mental health screen, the odds ratios associated with other model covariates (i.e., youth's age, gender, and race/ethnicity) were much smaller and consistent across both mental health service outcomes of interest. Hence, although the analysis showed that minority youths received fewer follow-up services than White youths, MAYSI-2 screening status, rather than race/ethnicity, appeared to be the main driver of youths' receipt of follow-up mental health services.

The second set of mixed-effects logistic regression analyses (Table 4), which stratified outcomes by youths' need for mental health services, suggest a more complicated picture of youths' access to detention-based services. In cases when youths demonstrated a need for

mental health services by screening positive on the MAYSI-2, youths' race/ethnicity did not appear to be a factor in whether youths received follow-up services. Without evidence of youths' need for mental health services, youths' race/ethnicity did have an impact on outcomes, with White youths more likely to receive care than minority youths. Hence, when need for mental health services is identified through structured surveys, race/ethnicity treatment differences appear minimal. The role of race/ethnicity on detention-based mental health services and referrals warrants further study.

Limitations

It is important to recognize several practical study limitations of the Indiana Project that will guide decision-making during project expansion. First, half of the participating detention centers in Indiana failed to collect and report data regarding follow-up mental health services received by screened youths. The reasons for this varied by detention center; most commonly, detention centers lacked the resources to provide any follow-up mental health services, to keep records of services received, or to search and review existing records.

Second, because we added Indiana Project sites to the study on a rolling basis, our sample may not be representative of all Indiana detention centers or detainees. Early participants in the project, for example, may differ from sites that agreed to participate later in the study period. Third, the implementation of the project, and efficient provision of follow-up mental health services for those in need, was more successful in some sites than others. For instance, when we consider all sites, slightly more than 30% of youths who screened positive received contact with a master's degree-level mental health clinician within 24 hours of intake. However, site-specific rates of this follow-up service varied greatly, from a low of 0.2% to a high of 56% of youths receiving the service after a positive MAYSI-2 screen. In the future it will be necessary to determine how the Indiana Project can better address the needs and limitations of individual sites.

Fourth, we are not able to report the quality or lasting effects of the follow-up mental health services received by youths, because data were not collected after the detention stay.

Conclusions

The Indiana Project, like similar assessments of mental health services in detention,¹⁴⁻¹⁷ showed that detention centers vary widely by facility size and geographic location, which likely results in differences in site leadership styles, the type and quality of services that can be offered to detainees, and the demographic characteristics of the population to be served. For example, larger, urban detention centers may be more likely to have mental health professionals on staff. Smaller, remote detention centers may be required to partner with local mental health care agencies to have staff available on an as-needed basis. Furthermore, sites may differ in how they screen youths and how they collect and report data. Future efforts are encouraged to consider how detention centers of varying size and location can best serve detained youths with mental health needs.

As a final consideration, there has been an increasing interest in understanding the role of race/ethnicity as it applies to juvenile justice decision-making in general,^{22,23} and access to mental health services for detained youths in particular.^{19,24} Researchers of racial disparity in mental health care for children outside the justice system suggest that disparity originates at detection of a mental health issue and initiation of care.²⁵ Thus, future efforts are needed to implement and improve mental health screening within detention centers and measure how screening may have an impact on racial disparity in the provision of mental health services to detained youths. ■

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This article was accepted April 19, 2014.

Contributors

M. C. Aalsma and K. Schwartz collaborated to write and edit all article content. A. J. Perkins contributed his expertise in statistical analysis and reviewed the Methods and Results sections of the article.

Acknowledgments

This study was funded by grants from the Indiana Criminal Justice Institute and HRSA/MCHB R40MC08721, provided through the US Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Program.

The authors wish to thank Judge Mary Harper and JauNae Hanger, JD, co-chairs of the Indiana Mental Health Screening Project, for their leadership; Amy Karozos, JD, and Laurie Elliott, JD, from the Youth Law TEAM (Technical Assistance, Education and Training, Advocacy of "Best Practice and Policy Recommendations," Monitoring for Compliance) for their management and facilitation of the project and data collection; and the detention-based project directors for their commitment to improving the care and well-being of Indiana detained youths.

Human Participant Protection

The Indiana Project was approved by the Indiana Supreme Court and the Indiana University Purdue University Indianapolis institutional review board. Review of these data did not require parent or youth consent because juvenile courts act in loco parentis for detained youths, and all youths' records were de-identified secondary data. Furthermore, the project's statewide partners developed legislation in 2007 to protect the confidentiality of youths who report incriminating information during screening (Indiana Code § 31-37-8-4.5).

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