

Validation of Brief Screening Tools for Mental Disorders Among New Zealand Prisoners

Ceri Evans, M.R.C.Psych., Ph.D.

Phil Brinded, M.B.B.S., F.R.A.N.Z.C.P.

Alexander I. Simpson, M.B.Ch.B., F.R.A.N.Z.C.P.

Chris Frampton, Ph.D.

Roger T. Mulder, Ph.D., F.R.A.N.Z.C.P.

Objective: This study aimed to validate brief intake screens for serious mental illnesses among New Zealand male prisoners. **Methods:** A prospective survey of consecutively admitted male remanded and sentenced prisoners was conducted across two New Zealand sites. Participants completed the Brief Jail Mental Health Screen (BJMHS) and the English Mental Health Screen (EMHS) upon prison admission. The validation standard, the Mini International Neuropsychiatric Interview (MINI), was completed for all positive screens and a random selection of negative screens. **Results:** A total of 1,292 brief screens and 530 MINI screens were completed. Fifty-one percent of the participants met MINI criteria for one of five targeted major mental disorders. In this study, the BJMHS performed with lower sensitivity, higher specificity, a lower false-positive rate, a significantly higher false-negative rate, and a much higher referral rate than in the validating U.S. study. And in this study the EMHS performed with lower sensitivity, less specificity, higher false-positive and false-negative rates, and a moderately higher overall referral rate than in the validating U.K. study. For the BJMHS and EMHS, the majority of false-negative cases involved a mood disorder and few involved psychosis. **Conclusions:** Although the BJMHS and EMHS did not perform well in terms of screening for MINI diagnoses, they appeared to be good at identifying a core group of prisoners who are psychotic and most likely to require urgent or semi-urgent intervention by mental health services. The most favorable clinical outcomes were achieved by defining a positive screen as one in which either the EMHS or the BJMHS criteria were fulfilled. (*Psychiatric Services* 61:923–928, 2010)

New Zealand, like other countries in which relevant surveys have been conducted, has a high prevalence of serious mental illness in remanded and sentenced

prisoner populations (1,2) but has no validated screening method for identifying prisoners with mental illness with the greatest need for treatment.

Two brief, empirically validated

screening tools were identified for testing: the Brief Jail Mental Health Screen (BJMHS), developed by Steadman and colleagues (3), in the United States and the English Mental Health Screen (EMHS), a brief, four-item screen developed by Grubin (Grubin A, unpublished manuscript, 2003) in the United Kingdom that is based largely on historical variables and is embedded within a general health screen given to prisoners upon admission.

The acceptability and accuracy of these tools needed to be determined within New Zealand, because there is evidence that New Zealand Maori, a group with comparatively less frequent service use, might be disadvantaged by the use of a screening tool that is predominantly based on historical engagement of services (4).

The aim of this study was to validate two brief screening tools to detect high-risk cases of serious mental illness among New Zealand male prisoners at the point of admission. These two screening tools could be delivered along with a screen for imminent suicide risk.

Methods

Design

A prospective survey was conducted of consecutively admitted male remanded and sentenced prisoners. All participants answered the BJMHS and EMHS questions upon admission. The performance of the screening tools was validated with a stan-

Dr. Evans is affiliated with Canterbury Regional Forensic Psychiatric Service, Hillmorton Hospital, Annex Rd., Christchurch, Private Bag 4733 New Zealand (e-mail: ceri.evans@cdhb.govt.nz). Assoc. Prof. Brinded, Dr. Frampton, and Prof. Mulder are with the Department of Psychological Medicine, University of Otago, Christchurch, New Zealand. At the time that this study was conducted, Assoc. Prof. Simpson was with the Mason Clinic, Auckland Regional Forensic Psychiatry Service, Auckland, New Zealand.

dard psychiatric diagnostic rating scale, the Mini International Neuropsychiatric Interview (MINI). The study was approved by the Multi-Region Ethics Committee.

Participants

All male prisoners admitted to Christchurch Men's Prison (August 2006 to December 2006) and sentenced to Auckland Central Remand Prison and Mount Eden Prison (July 2007 to August 2007) were given the screens.

Measures

The BJMHS (3) and the EMHS (Grubin A, unpublished manuscript, 2003) were used individually and in composite as screening tools to allow for comparison with each other and against previous reported performance.

BJMHS. The BJMHS comprises questions organized into two sections. The first section includes six questions about thought interference by others, weight loss or gain, psychomotor retardation, increased energy or activity, and inappropriate guilt. The second section includes two items that ask whether the inmate was ever hospitalized for emotional or mental health problems and whether the inmate is taking psychotropic medication. The BJMHS is rated as a positive screen if any two of the six symptom questions are endorsed or if either one of the mental health history questions are endorsed. The BJMHS has been validated against the Structured Clinical Interview for DSM-IV–Lifetime Version (SCID-L) and deemed suitable for use in male jail settings (3,5).

EMHS. The EMHS involves four questions: whether the inmate had been charged with homicide, ever visited a psychiatrist outside prison, received medication (antidepressant or antipsychotic) for any mental health problems, or tried to harm himself or herself (6; Grubin A, unpublished manuscript, 2003). A screen was considered to be positive if there was a positive response to any of the questions. It has been validated against the Schedule for Affective Disorders and Schizophrenia–Lifetime Version (SADS-L) (7).

The EMHS question “Have you

ever seen a psychiatrist outside prison?” was adapted to read, “Have you ever seen a psychiatrist outside prison for emotional or mental health problems?” The BJMHS item asking about weight loss or gain of “two pounds” was adjusted to the metric system to read, “one kilogram” (about 2.2 pounds).

MINI. The MINI was used to validate the performance of the screening tools in detecting five specific *DSM-IV* axis I diagnoses previously regarded as indicative of severe mental illness (major depressive disorder, depression with melancholia, hypomania or mania, current psychosis, and psychotic mood disorder) (3, Grubin A, unpublished manuscript, 2003). The MINI is regarded as a gold-standard short diagnostic structured interview, with strong performance in terms of its validity versus the Structured Clinical Interview for DSM-III-R–Patient Version (SCID-P) (8).

Training

The Department of Corrections nursing staff (comprehensively trained) at the Christchurch and Auckland prison sites received formal training on the administration of the composite pilot screen, information on the background to the development of the screen, and practical training on the use of the composite screen. Staff who used the MINI screen received standardized formal training on how to rate prisoners for specific psychiatric diagnoses.

Procedure

Male inmates who were consecutively admitted were given the composite screening interview by trained prison nursing staff. The duration of the composite screen (approximately five minutes) was comparable to nonvalidated screening procedures used elsewhere in New Zealand. Each prisoner with a positive screen was referred for specialist mental health assessment and was also referred for a MINI screen, as was a randomly generated 20% sample of persons who screened negative. Participation in the MINI screen was voluntary, and no incentive was offered. Written informed consent was

obtained from participants (92% of those approached).

Statistical analysis

The performance of each screening tool was compared with the MINI to assess for overall accuracy (the proportion of cases correctly identified as either positive or negative for mental illness), sensitivity, specificity, and false-positive and false-negative rates, and the overall referral rate was examined for those with a positive screen.

Results

A total of 1,292 screens (761 in Christchurch and 531 in Auckland) were completed. A total of 530 MINI screens were completed (312 in Christchurch and 218 in Auckland). The dominant ethnic groups were New Zealand European (N=546, 42%) and Maori (N=440, 34%).

Table 1 shows that of the sample of 530, 51% of participants met MINI criteria for one of the five targeted major mental disorders, including major depressive disorder (40%), depression with melancholia (36%), and hypomania or mania (22%). Compared with New Zealand European prisoners, Maori prisoners had higher rates of all five diagnoses. Prisoners who were remanded had higher rates than convicted prisoners for all five diagnoses, particularly for psychosis.

Performance of EMHS and BJMHS

Table 2 shows high levels of endorsement for EMHS questions pertaining to psychiatric history, although rates were lower for Maori prisoners. Similarly, the BJMHS revealed significant rates of past psychiatric hospitalization (10%) and current treatment with psychotropic medication (9%), with greatest endorsement for the “feeling useless or sinful” item (13%) and the weight loss item (12%). Maori prisoners had higher rates of endorsement of the thought insertion and mind reading items, compared with New Zealand European prisoners.

Of the 212 prisoners who met MINI criteria for major depressive disorder, 79 (37% of the group of 212 prisoners, or 6% of the whole sample) endorsed suicidal ideation. Of these

Table 1

Mini International Neuropsychiatric Interview (MINI) diagnoses and endorsement of general screening items by male prisoners in New Zealand (NZ), by ethnicity and legal status

Variable	Total population		NZ European		Maori		Remanded		Convicted	
	N	%	N	%	N	%	N	%	N	%
MINI diagnoses										
Total N	530		229		187		365		186	
Major depressive disorder	212	40	87	38	79	42	161	44	79	42
Depression with melancholia	193	36	81	35	70	37	149	41	34	18
Hypomania or mania	119	22	46	20	46	25	90	25	25	13
Current psychosis	96	18	27	12	47	25	83	23	8	4
Psychotic mood disorder	61	12	12	5	32	17	57	16	3	2
Any MINI diagnosis	270	51	106	46	106	57	203	56	56	30
General screening items										
Total N	1,284		546		440					
Homelessness	138	11	53	10	61	14				
Previous imprisonment	905	70	379	69	349	79				
Current ideas of self-harm or suicide	30	2	15	3	6	1				

79 prisoners, 63 (80%) screened positive on the EMHS and 54 (68%) screened positive on the BJMHS.

As shown in Table 3, compared with the U.S. study, our study showed that in New Zealand the BJMHS performed against the standard with lower sensitivity, higher specificity, a lower false-positive rate, and a significantly higher false-negative rate. The BJMHS generated a much higher overall referral rate for male prisoners in New Zealand than for male prisoners in jail in the United States (23% versus 10%). Compared with the U.K. study, our study showed that the EMHS performed against the standard with markedly lower sensitivity, less specificity, much higher false-positive rates (40% versus 10%), and higher false-negative rates and generated a moderately higher overall referral rate (33% versus 26%). The highest overall accuracy was obtained by the BJMHS among U.S. jail detainees.

A composite screen in which participants were required to screen positive on either the BJMHS or the EMHS performed with low to moderate sensitivity, good specificity, a high false-positive rate and a high false-negative rate, and generated a high referral rate (38%). A composite tool that required participants to screen positive on both the BJMHS and the EMHS performed with very low sensitivity, very good specificity, high

false-positive and false-negative rates, and generated a relatively low overall referral rate (19%). The various screens performed similarly for the remanded and convicted populations.

Analysis of false negatives

For both the BJMHS and EMHS, the majority of persons who were categorized as having a false negative according to the MINI criteria had a mood disorder; few had a diagnosis of psychotic disorder (Table 4). The low-

est false-negative rates for each diagnosis, particularly for the psychotic diagnosis, were achieved by the composite screen, which required a positive screen on either the BJMHS or the EMHS.

Discussion

Overall rates of mental disorder

Using the MINI as the validating standard, we identified very high rates of serious mental illness in the New Zealand prison population, in

Table 2

Endorsement of general screening items by male prisoners in New Zealand (NZ)^a

Variable	Total population (N=1,292)		NZ European (N=546)		Maori (N=440)	
	N	%	N	%	N	%
EMHS question^b						
Murder or manslaughter	10	1	0	—	5	1
Seen by psychiatrist before	255	20	138	25	76	17
Past psychotropic medication	241	19	137	25	70	16
Harmed self before	193	15	104	19	55	13
BJMHS question^c						
Thought insertion	57	4	12	2	26	6
Mind reading	47	4	12	2	22	5
Loss of weight	154	12	71	13	49	11
Increased activity	90	7	37	7	33	8
Slowed down	81	6	31	6	30	7
Useless or sinned	165	13	78	14	50	11
Past psychiatric hospitalization	130	10	64	12	47	11
Current psychotropic medication	118	9	63	12	37	8

^a Results based on 1,292 screens and 530 Mini International Neuropsychiatric Interviews

^b EMHS: English Mental Health Screen

^c BJHMS: Brief Jail Mental Health Screen

Table 3

Performance of brief screens to detect mental disorders among male New Zealand (NZ) prisoners in this study and previous studies^a

Measure ^b	Standard	N screened	Prevalence of mental disorder (%)	Accuracy (%)	Sensitivity (%)	Specificity (%)	False-positive rate (%)	False-negative rate (%)	Referral rate (%)
BJMHS									
US	SCID	211	15	74	66	77	49	15	10
NZ	MINI	530	51	62	34	86	32	40	23
EMHS									
UK	SADS-L	90	20	63	97	84	10	0	26
NZ	MINI	530	51	60	42	75	40	40	33
BJMHS or EMHS (NZ)	MINI	530	51	63	50	73	40	36	38
BJMHS and EMHS (NZ)	MINI	530	51	60	27	89	31	43	19

^a BJMHS, Brief Jail Mental Health Screen; EMHS, English Mental Health Screen; SCID, Structured Clinical Interview for DSM-IV; MINI, Mini International Neuropsychiatric Interview, SADS-L, Schedule for Affective Disorders and Schizophrenia–Lifetime Version. Results in New Zealand were based on 1,292 screens and 530 MINI screens. In the New Zealand sample, sensitivity and specificity are adjusted to account for the bias introduced by the sampling procedure (all positive screens received MINI screens; a randomized 20% of negative screens were sampled).

^b The BJMHS was previously studied in the United States by Steadman, et al., 2005 (3), and the EMHS was previously studied in the United Kingdom by Grubin, 2003 (unpublished manuscript).

line with previous international research (2) and New Zealand research (1).

However, the rates of mental disorder in New Zealand prisons were significantly higher than the corresponding rates identified in the validation studies for the EMHS and BJMHS, which raises questions about the reliability and validity of the MINI as a standard diagnostic instrument in this

context. There are several reasons that support the use of the MINI as a validation instrument. First, inter-rater reliability testing in Christchurch did not identify any systematic rater bias. Second, the prevalence rate of mental disorders (N=90, 20%) identified using the SADS-L in the United Kingdom was about half the level expected by the authors (6), reducing the apparent discrepancy be-

tween their study and ours. Third, several clinical indicators, including high rates of previous hospitalization, consultation with a psychiatrist, or use of psychiatric medication, supported the presence of high psychiatric morbidity in our sample. Fourth, the MINI has been validated against other, more lengthy, gold standards, including the SCID (8) and the Composite International Di-

Table 4

Analysis of false negatives by screening tools to detect mental illness among male New Zealand (NZ) prisoners^a

Measure	All disorders			Major depressive disorder			Depression with melancholia			Hypomania or mania			Current psychosis			Psychotic mood disorder		
	Total	N	%	Total	N	%	Total	N	%	Total	N	%	Total	N	%	Total	N	%
BJMHS																		
NZ, all	325	130	40	323	90	28	317	79	25	325	59	18	322	28	9	309	20	7
NZ European	134	50	37	134	38	28	132	34	26	134	23	17	134	7	5	130	4	3
NZ Maori	115	49	43	114	31	27	111	26	24	115	22	19	114	14	12	107	9	8
EMHS																		
NZ, all	238	96	40	235	65	28	230	57	25	238	45	19	235	25	11	224	20	9
NZ European	74	24	32	73	18	25	72	16	22	74	10	14	73	1	1	72	1	1
Maori	96	47	49	95	30	32	92	27	29	96	19	20	96	17	18	89	12	14
BJMHS or EMHS																		
NZ, all	203	73	36	201	46	23	197	41	21	203	33	16	201	13	7	192	10	5
NZ European	64	21	33	64	15	23	63	13	21	64	10	16	64	0	0	63	0	0
Maori	81	35	43	80	21	26	78	20	26	81	12	15	81	9	11	75	6	8
BJMHS and EMHS																		
NZ, all	360	153	43	357	109	31	350	95	27	360	71	20	356	40	11	341	30	9
NZ European	144	43	37	143	41	29	141	37	26	144	23	16	143	8	6	139	5	4
Maori	130	61	47	129	40	31	125	33	26	130	29	22	129	22	17	121	15	12

^a Results based on 1,292 screens and 530 Mini International Neuropsychiatric Interview (MINI) screens. Sensitivity and specificity are adjusted to account for the bias introduced by the sampling procedure (all positive screens received MINI screens; a randomized 20% of negative screens were sampled).

agnostic Interview (CIDI) (8–10). Finally, the MINI has an interview structure similar to the other gold standards, and there is no reason to suspect that the longer standard interviews would produce significantly different results for the New Zealand population.

It has also been argued that any epidemiological research that relies on structured diagnostic instruments runs the risk of finding arbitrarily high levels of mental illness because of the tendency to categorize general, common symptoms as a mental disorder. In the study presented here, very high rates of endorsement of depressive symptoms emerged, which may reflect an individual's transient response to adjusting to the stressful prison environment, with symptoms diminishing as adjustment occurs, rather than reflecting the true presence of a depressive disorder. It is possible that a clinical assessment would have greater ability to differentiate between an adjustment response with depressive symptoms and a true depressive disorder.

If the MINI is overinclusive in the manner described, our data are likely to underestimate the performance of the screening tools. Artificially high rates of mental disorders would lead to lower sensitivity ratings, because the screens would need to detect potential mental illness among those for whom a diagnosis was dubious.

Performance of the screening tools

The basic performance data suggest that neither the BJMHS nor the EMHS was particularly effective as a diagnostic screening tool for mental disorders in New Zealand prisons. However, secondary analysis of false-negative cases suggested that the screens were effective in identifying individuals with psychosis, although the screens were not as specific in detecting mood disturbance. It is arguable that depressive symptoms are such a common finding in the prison setting that it is not desirable for the screening tool to screen individuals as being positive on the basis of these symptoms in the absence of, for example, psychosis or suicidality.

The implications of a false-negative and a false-positive finding

should be interpreted with the prison context in mind. If a prisoner with low-grade but persistent depressive symptoms screens negative, the implication is that the prisoner would continue to experience these symptoms without further mental health intervention, although the prisoner can still be identified after admission—for example, by officers on the prison wing who can observe the prisoner's longitudinal presentation. A false positive means that the prisoner with either current symptoms or a relevant psychiatric history will undergo further brief questioning by a mental health professional. Although service-level resource implications must be considered, the outcome for the individual is not harmful and could be beneficial.

Both the BJMHS and the EMHS had comparatively low levels of sensitivity in the New Zealand study. The pilot study of the EMHS in the United Kingdom appears to be the outlier in terms of an unusually good performance by a screening tool—that is, a zero rate of false negatives in the male prison population and extremely high sensitivity rates for depression, a disorder with a high prevalence, arising from a small number of general, historically based, and widely endorsed screening questions. Although we must not minimize the importance of detecting mood disturbance in the prison setting, it is somewhat reassuring that the lower levels of sensitivity of the screens in the New Zealand setting were predominantly due to the detection by the MINI of very high rates of mood disturbance; few cases involving psychosis went undetected by either screen.

The pattern and rate of mental disorders in the false-negative cases were remarkably similar for both the BJMHS and EMHS. Also, no single historical question in either screen appeared to be especially powerful in identifying prisoners with mental illness, and all questions appeared to contribute to the overall performance of the EMHS in detecting cases of psychosis.

Because of the prevalence of depressive symptoms in the prison setting and the relatively benign mean-

ing of a false-positive screen at the individual level, it is arguable that the clinical priority for the study presented here should be the minimization of false-negative cases of psychosis. The specific diagnoses may be less relevant in this context than the detection of an at-risk population, specifically, those who are currently psychotic and those who are actively suicidal (which would be addressed by a supplementary screen). These cases require at least semi-urgent psychiatric assessment, and sometimes acute care is required.

In this sense, both the EMHS and the BJMHS perform adequately: although they have low sensitivity in terms of diagnoses, both the EMHS and the BJMHS were good at detecting psychosis. Although it would be simpler to use either the EMHS or the BJMHS, neither performed as well on its own as they did in combination, and the time that it takes to complete both screens is in line with current, nonvalidated approaches to screening in New Zealand. Overall, the most effective screening approach from a clinical perspective, particularly in terms of minimization of false-negative rates, was achieved by a screen where referral for mental health nursing assessment was triggered by a positive screen on either tool.

A two-tiered strategy for screening

Adopting a combination of both screens leads to the challenge of how to manage the high false-positive rate in terms of the demand placed on forensic mental health services. However, it should be noted that the developers of the BJMHS had a higher false-positive rate than that found in the study presented here, yet they felt able to endorse the screen for the male detainees in jail (3). It is unlikely that a brief screening instrument will be able to be developed that can be administered easily by prison nursing staff and that does not produce significant levels of false-positive cases, making it unrealistic to pursue an ideal screening tool with a much lower referral rate.

The data presented here suggest that an effective strategy might be to introduce a second stage to the

screening process, entailing a brief triage interview with a mental health professional for those who screened positive, in order to refer prisoners with symptoms of psychosis, mania, severe depression, and suicidality for specialist psychiatric assessment, as opposed to those with uncomplicated depressive symptoms, who could be reviewed by primary health care services. This approach would address the national cultural context by providing an opportunity for a focus on potential cultural considerations—for example, to identify cultural beliefs that may mimic psychosis. This two-stage screening strategy would resemble the three-stage model proposed in the American Psychiatric Association's guidelines for psychiatric services for jails and prisons (11).

Impact on regional forensic psychiatry services

In Christchurch, 54 (8%) of the 656 prisoners who were screened and who underwent triage assessments by a psychiatric nurse and subsequent consultant psychiatrist assessment were maintained on the caseload. In Auckland, referrals to the prison team increased from an average of eight per week to a maximum of 43 per week during the screening study, and the caseload of the prison team rose from 104 to a maximum of 141.

Limitations

An important limitation of the study presented here was the restriction of the sample to male prisoners. The performance of the BJMHS with female prisoners cannot be assumed to be the same as it is for male prisoners, although there is recent evidence that additional questions targeting psychiatric morbidity in the female population do not necessarily improve the performance of the screen (12). As indicated above, the use of a struc-

tured diagnostic instrument as the gold standard as opposed to interviews with an experienced clinician leaves open the question of the validity of such instruments. Our study may have had a slightly higher false positive rate than the U.K. study, because the U.K. study rated a screen as being positive only if the individual had received treatment from a psychiatrist. We categorized a screen as positive if an individual had used psychiatric medication or had seen a psychiatrist (although it should be noted that rates of psychiatric medication use and seeing a psychiatrist were similar in our study). Similarly, our study also did not differentiate between a history of self-harm outside as opposed to inside of prison, which might have led to further false-positive cases, but which still would have identified a relevant clinical history.

Conclusions

In conclusion, although the BJMHS and EMHS did not perform well in terms of screening for MINI diagnoses, they appeared to be good at identifying a core group of prisoners at risk because of their mental disorders and who may require urgent or semi-urgent intervention by mental health services—that is, prisoners who are psychotic. A pragmatic way forward would be to accept the higher referral and false-positive rates and to focus on further development of the existing second-tier screening interview process by mental health professionals.

Acknowledgments and disclosures

Funding was provided by the Department of Corrections and the Ministry of Health. The authors thank the representatives from the Regional Forensic Psychiatry Services and those involved in project management and data collection. The opinions expressed in this article are those of the authors and do not necessarily represent the official positions or policies of the

New Zealand Department of Corrections or Ministry of Health.

The authors report no competing interests.

References

1. Brinded P, Simpson A, Laidlaw T, et al: Prevalence of psychiatric disorders in New Zealand prisons: a national study. *Australian and New Zealand Journal of Psychiatry* 35:166–173, 2001
2. Fazel S, Danesh J: Serious mental disorder in 23,000 prisoners: a systematic review of 62 surveys. *Lancet* 359:545–550, 2002
3. Steadman H, Scott J, Osher F, et al: Validating the Brief Jail Mental Health Screen. *Psychiatric Services* 56:816–822, 2005
4. Simpson AIF, Brinded P, Fairley N, et al: Does ethnicity affect need for mental health service among New Zealand prisoners? *Australian and New Zealand Journal of Psychiatry* 37:728–734, 2003
5. Steadman HJ, Osher F, Robbins PC, et al: Prevalence of serious mental illness among jail inmates. *Psychiatric Services* 60:761–765, 2009
6. Grubin D, Carson D, Parsons S: Report on New Prison Reception Health Screening Arrangements: The Results of a Pilot Study in 10 Prisons. Newcastle, United Kingdom, University of Newcastle, 2002
7. Endicott J, Spitzer RL: A diagnostic interview: Schedule for Affective Disorders and Schizophrenia. *Archives of General Psychiatry* 35:837–844, 1978
8. Sheehan D, Lecrubier Y, Harnett Sheehan K, et al: The validity of the Mini International Neuropsychiatric Interview (MINI) according to the SCID-P and its reliability. *European Psychiatry* 12:232–241, 1997
9. Lecrubier Y, Sheehan D, Weiller E, et al: The Mini International Neuropsychiatric Interview (MINI): a short diagnostic structured interview according to the CIDI. *European Psychiatry* 12:224–231, 1997
10. Amorim P, Lecrubier Y, Weiller E, et al: DSM-III-R psychotic disorders: procedural validity of the Mini International Neuropsychiatric Interview (MINI): concordance and causes for discordance with the CIDI. *European Psychiatry* 13:26–34, 1998
11. *Psychiatric Services in Jails and Prisons*. Washington, DC, American Psychiatric Publishing, Inc, 2000
12. Steadman HJ, Robbins PC, Islam T, et al: Revalidating the Brief Jail Mental Health Screen to increase accuracy for women. *Psychiatric Services* 58:1598–1601, 2007