

**The Multnomah Community Ability Scale (MCAS) and the
Adult Texas Recommended Authorization Guidelines (Adult-TRAG)
Functional Impairment Dimension:
Opposite Sides of the Same Coin**



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Abstract

As the Texas Department of Mental Health and Mental Retardation (TDMHMR) moves toward statewide implementation of its Resiliency and Disease Management (R&DM) initiative, the Mental Health Adult Uniform Assessment must be streamlined. Currently, TDMHMR's Mental Health Adult Uniform Assessment contains the *Multnomah Community Ability Scale* (MCAS; Barker, Barron, McFarland, & Bigelow, 1994), a well-established, 17-item measure of the *ability* to function in community settings, and *Dimension 4* of the *Adult Texas Recommended Authorization Guidelines* (Adult-TRAG; TDMHMR, 2003), *Functional Impairment*, a newly-developed, 1-item measure of the *lack of ability* to function in community settings. The goal of the present study was to determine if the MCAS and the Adult-TRAG Functional Impairment dimension are opposite sides of the same coin. Descriptive statistics, Analyses of Variance (ANOVA) techniques, and correlations were conducted using data from 7,069 adult mental health consumers collected at intake during Fiscal Year 2004, Quarters 1 through 2 (September 1-February 29) at four current R&DM sites (i.e., Texas Panhandle MHMR, Lubbock Regional MHMR Center, MHMR of Tarrant County, and Hill Country Community MHMR Center). The results show that MCAS total scores and Adult-TRAG Functional Impairment ratings mirrored each other across principal diagnoses, level of care recommendations, and level of care authorizations. Moreover, there was a significant negative correlation between MCAS subscale and total scores and Adult-TRAG Functional Impairment ratings across principal diagnoses and overall. Together, the findings of the current study suggest that the MCAS and the Adult-TRAG Functional Impairment dimension are, indeed, opposite sides of the same coin. Omission of the MCAS (the longer of the two) from the Mental Health Adult Uniform Assessment for R&DM is therefore recommended, which has since been done.

Introduction

The Texas public mental health system is fraught with examples of apparent inequities in care. There is great variability in the types and amounts of services provided to consumers that cannot be explained by differences in specific needs for care (e.g., diagnosis, intensity of symptoms, level of functioning). Yet, in a system constrained by limited resources, it is critical to distribute services in an efficient manner according to identified needs and appropriateness of the service modality.

In order to address this issue, the Texas Department of Mental Health and Mental Retardation (TDMHMR) is developing a new *Mental Health Adult Uniform Assessment* as part of its Resiliency (children and adolescents) and Disease Management (adults) initiative (R&DM; House Bill 2292). A critical component of this new Mental Health Adult Uniform Assessment for R&DM is the *Adult Texas Recommended Authorization Guidelines* (Adult-TRAG; TDMHMR, 2003). The Adult-TRAG is meant to be used face-to-face by a Qualified Mental Health Professional – Community Services (QMHP-CS) at each Local Mental Health Authority (LMHA) and their providers to assess adult mental health consumers along nine dimensions in addition to their most recent principal diagnosis, and to provide a methodology to facilitate rapid and consistent recommendations into one of five levels of care:

- ◆ Crisis Services;
- ◆ Service Package 1: Pharmacological Management, Medication Training and Supports, Routine Case Management, and Skills Training and Development;
- ◆ Service Package 2: Pharmacological Management, Medication Training and Supports, Routine Case Management, Skills Training and Development, and Rehabilitative Counseling and Psychotherapy;
- ◆ Service Package 3: Pharmacological Management, Medication Training and Supports, Psychosocial Rehabilitation, Supported Employment, and Medical Services (R.N.); and
- ◆ Service Package 4: Assertive Community Treatment (ACT)/ACT Alternative.

Use of the *Adult-TRAG* began September 1st, Fiscal Year 2004, at four R&DM implementation sites, including Texas Panhandle MHMR, Lubbock Regional MHMR Center, MHMR of Tarrant County, and Hill Country Community MHMR Center. Furthermore, implementation of the *Adult-TRAG* at all remaining LMHAs and their providers will begin by September 1st, Fiscal Year 2005.

As TDMHMR moves toward statewide implementation of its R&DM initiative, every effort must be made to streamline the new Mental Health Adult Uniform Assessment, with duplicate assessment dimensions removed. Currently, TDMHMR's Mental Health Adult Uniform Assessment contains the *Multnomah Community Ability Scale* (MCAS; Barker, Barron, McFarland, & Bigelow, 1994), a well-established, 17-item measure of the *ability* to function in community settings among persons with severe mental illness, and *Dimension 4* of the *Adult-TRAG*, *Functional Impairment*, a newly-developed, 1-item measure of the *lack of ability* to function in community settings among individuals with severe mental illness. Thus, removal of one of these measures, preferably the MCAS (the longer of the two) may be in order. But only if the MCAS and the *Adult-TRAG* share certain properties.

If they are opposite sides of the same coin, then scores on the MCAS and Adult-TRAG Functional Impairment dimension should mirror each other across principal diagnoses, as well as across level of care recommendations and actual level of care authorizations. Moreover, there should be a negative correlation between MCAS scores and Adult-TRAG Functional Impairment ratings; the rationale being that whereas *higher* subscale and total scores on the MCAS indicate *greater* functioning, *higher* ratings on the Adult-TRAG Functional Impairment dimension indicate *lesser* functioning.

MCAS (Barker et al., 1994)

The MCAS requires clinicians to rate consumers from 1 to 5 according to 17 items on four subscales, including *interference with functioning* (5-items; e.g., What is the client's level of intellectual functioning?; subscore = 5 to 25), *adjustment to living* (3-items; e.g., How successfully does the client manage his/her money and control expenses?; subscore = 3 to 15), *social competence* (5-items; e.g., In general, what are people's reactions to the client?; subscore = 5 to 25), and *behavioral problems* (4-items; e.g., How frequently does the client comply with his/her prescribed medication regimen?; subscore = 4 to 20). Total scores range from 17 to 85, again, with higher subscale and total scores indicating greater functioning.

The MCAS is a reliable measure. (*Reliability* refers to the consistency or stability of assessment results.) For instance, results from one study reported by Barker et al. (1994) on inter-rater and test-retest reliability indicated a more than sufficient correlation of the total scores for both the inter-rater and test-retest. Barker and her colleagues (1994) also found that the MCAS had a relatively high level of internal consistency, with a four-factor structure that corresponded well to its four subscales (but see Hendryx, Dyck, McBride, & Whitbeck, 2001). Moreover, although correlations for a few items were lower than others, the results generally indicated adequate inter-item reliability.

The MCAS is also a valid measure of functioning among adults with severe mental illness. (*Validity* refers to the convergence or divergence of assessment results with those obtained using conceptually similar or different measures, respectively.) Barker and her associates (1994), for example, reported a high degree of concurrent validity, in that MCAS scores correlated positively with global ratings of ability made by case managers for 330 randomly selected adult consumers with severe mental illness. More recently, Hendryx et al. (2001) found concurrent validity of the MCAS subscales, such that subscores correlated as expected with scores from similar measures, including the *Physical Health Component Summary* (PHCS; McHorney, Ware, & Raczek, 1993), *Mental Health Component Summary* (MHCS; McHorney et al., 1993), *Client Satisfaction Questionnaire* (CSQ; Nguyen, Attkisson, & Stegner, 1983), and three questions from the *Lehman Quality of Life Interview* (LQLI) that address how consumers feel about their social functioning (Lehman, 1991), as well as other relevant case manager and self-report variables. Zani, McFarland, Wachal, Barker, and Barron (1999) also found support for the MCAS total score as a valid predictor of psychiatric-related hospitalization.

Adult-TRAG Functional Impairment Dimension (TDMHMR, 2003)

The 1-item Adult-TRAG Functional Impairment dimension considers the degree of functional impairment among individuals with severe mental illness using several indicators. The criteria include ability to interact with others, to maintain hygiene and functions of daily living, to fulfill role responsibilities, and to maintain activities, such as sleep, eating, and/or sexual interest. These factors are considered relative to the person's normal level of functioning. The 5-point rating system for the Adult-TRAG Functional Impairment dimension is presented below, with higher ratings indicating lesser functioning. Importantly, only one criterion needs to be met for that rating to be selected. Therefore, the clinician chooses the highest rating for which at least *one* of the criteria is satisfied.

1 – None

- ◆ No functional impairment or minor functional impairment that does not disrupt ability to interact with others, to maintain hygiene and functions of daily living, to fulfill role responsibilities, and to maintain activities, such as sleep, eating, and/or sexual interest, during the past 90 days.

2 – Low (one or more of the following)

- ◆ Evidence of deterioration in some interactions with others, with increased incidence of arguments, hostility or conflict, yet still able to maintain some meaningful and satisfying relationships during the past 90 days.
- ◆ Evidence of some minor disruptions in self-care and/or other activities during the past 90 days.
- ◆ Evidence of minor but consistent difficulties in social role functioning such as difficulty fulfilling parental responsibilities or performing at expected level in work or school, yet still able to maintain those roles during the past 90 days.

3 – Moderate (one or more of the following)

- ◆ Becoming withdrawn, isolated, or otherwise troubled in most significant relationships, with no evidence of any impulsive or abusive behaviors during the past 90 days.
- ◆ Appearance and hygiene are below baseline some of the past 90 days.
- ◆ Moderate disturbance in activities such as sleep, eating, and/or sexual interest that do not pose a serious threat to health during the past 90 days.
- ◆ Moderate inability to fulfill responsibilities and obligations to job, school, self, or significant others during the past 90 days.
- ◆ Evidence of moderate difficulties in interactions with others and ability to maintain responsibilities during the past 90 days.
- ◆ Able to maintain responsibilities in school, work, parenting, or other obligations during the past 90 days but only in a structured and/or protected setting.

4 – Significant (one or more of the following)

- ◆ Evidence of significant difficulties in interactions with others, which may include impulsive or abusive behaviors during the past 90 days.
- ◆ Evidence of significant withdrawal and avoidance of almost all social interactions during the past 90 days.
- ◆ Appearance and hygiene are below baseline consistently for most of the past 90 days.
- ◆ Significant disturbance in activities such as sleep, eating, and/or sexual interest as evidenced by such things as weight change or fatigue that threaten physical/mental well being during the past 90 days.
- ◆ Significant inability to fulfill responsibilities in school, work, parenting, or other obligations to the point of complete neglect on a frequent basis or for an extended period of time during the past 90 days.

5 – High (one or more of the following)

- ◆ Evidence of extreme deterioration in interactions with others which may include inappropriate or unintelligible communication, threatening behaviors with little or no provocation and/or loss of control over impulses or abusive behavior during the past 90 days.
- ◆ Evidence of total withdrawal from all social interactions during the past 90 days.
- ◆ Evidence of inability to attend to the most basic daily needs such as personal hygiene, appearance, nutrition and safe shelter during the past 90 days.
- ◆ Extreme weight change and extreme disruptions in sleep, or fatigue causing serious harm to physical/mental health during the past 90 days.
- ◆ Evidence of complete inability to maintain any aspect of personal responsibility in community, social and/or family roles during the past 90 days.

The reliability and validity of Version 1.0 of the *User's Manual for the Adult-TRAG*, including the Functional Impairment dimension, were examined in a study by Ruggiero (2003). Of particular relevance here are the findings concerning the reliability of the of the Functional Impairment dimension. The reliability (intraclass correlations) coefficients for the nine Adult-TRAG dimensions, including Functional Impairment (intraclass correlation = .61), indicated relatively good reliability among eight clinicians who participated in the study, thus no modifications were since made to this dimension.

The Present Study

The goal of the present study was to determine if the MCAS and the Adult-TRAG Functional Impairment dimension are, indeed, opposite sides of the same coin. Three questions were addressed with this objective in mind:

- (1) Do the MCAS and Adult-TRAG Functional Impairment dimension mirror each other across principal diagnoses?
- (2) Do the MCAS and Adult-TRAG Functional Impairment dimension mirror each other across level of care recommendations and authorizations?
- (3) Are the MCAS and Adult-TRAG Functional Impairment dimension negatively correlated?

Descriptive statistics, Analyses of Variance (ANOVA) techniques, and correlations were used to answer these questions, the methods and results for which are presented below, followed by a more general discussion of the findings.

Method and Results

Participants

Participants were 7,069 adult mental health consumers at the four R&DM sites for whom all MCAS subscale scores, MCAS total scores, and Adult-TRAG Functional Impairment ratings were available at intake during Fiscal Year 2004 Quarters 1 through 2 (September 1-February 29). Each participant also had an intake (auto-calculated) Level of Care Recommended (LOC-R) and an intake Authorized Level of Care (LOC-A). An additional inclusion criterion was the date at which the Adult-TRAG was administered. In contrast, the date at which the MCAS was administered was missing for 1,068 of the 7,069 study participants due to a problem with the (new) data collection system known as Web Client Assignment and REgistration (WebCARE) that has since been addressed. Importantly, TDMHMR protocol allows up to 30 days between the administration of the MCAS and Adult-TRAG. However, there was an average of only 3.60 ($SD = 10.03$) days between the administration of the MCAS and Adult-TRAG among participants in the present study for whom both administration dates were available ($N = 6,001$).

More specifically, there were 1,536 (21.7%) participants from Texas Panhandle MHMR, 289 (4.1%) from Lubbock Regional MHMR Center, 3,568 (50.5%) from MHMR of Tarrant County, and 1,676 (23.7%) from Hill Country Community MHMR Center.

Overall, the majority were female (62.1%; $N = 4,390$), and this was true at each R&DM site, including Texas Panhandle MHMR (66.8%; $N = 1,026$), Lubbock Regional MHMR Center (56.7%; $N = 164$), MHMR of Tarrant County (58.9%; $N = 2,101$), and Hill Country Community MHMR Center (65.6%; $N = 1,099$).

The age of study participants on the first day of Fiscal Year 2004 (September 1) ranged from 17 to 86, with a mean age of 43.36 ($SD = 12.28$). Similar age distributions were found among participants at each R&DM implementation site, including Texas Panhandle MHMR (age range = 17 to 86; $M = 43.40$; $SD = 13.09$), Lubbock Regional MHMR Center (age range = 18 to 79; $M = 43.72$; $SD = 11.37$), MHMR of Tarrant County (age range = 17 to 86; $M = 43.58$; $SD = 11.51$), and Hill Country Community MHMR Center (age range = 17 to 81; $M = 42.79$; $SD = 13.22$).

Table 1 displays study participants at each R&DM implementation site according to their ethnic group. As the first and fourth rows reveal, at both Texas Panhandle MHMR and Hill Country Community MHMR Center, most were White, followed by Hispanic, Black, and other ethnicities. The second and third rows indicate that, among participants at Lubbock Regional MHMR Center and MHMR of Tarrant County, most were White, followed by Black, Hispanic, and other ethnic groups. However, as the last row shows, overall, most study participants were White, followed by Hispanic, Black, and other ethnicities.

Table 1
Percent (%) and Number (N) of Study Participants at Each R&DM Implementation Site according to their Ethnic Group

R&DM Implementation Site	Ethnic Group							
	White		Black		Hispanic		Other	
	%	N	%	N	%	N	%	N
Texas Panhandle MHMR	78.9%	1,212	7.1%	109	8.4%	129	4.5%	69
Lubbock Regional MHMR Center	61.2%	177	19.0%	55	17.6%	51	1.0%	3
MHMR of Tarrant County	65.8%	2,346	24.8%	884	7.1%	253	1.8%	64
Hill Country Community MHMR Center	71.3%	1,195	1.9%	32	26.0%	435	0.7%	11
Overall	69.7%	4,930	15.3%	1,080	12.3%	868	2.1%	177

Most study participants (66.7%; N = 4,715) did not possess full Medicaid benefits and were medically-indigent, including participants at Texas Panhandle MHMR (71.0%; N = 1,091), Lubbock Regional MHMR Center (57.1%; N = 165), MHMR of Tarrant County (65.2%; N = 2,327), and Hill Country Community MHMR Center (67.5%; N = 1,132).

Also, of study participants whose intake data was analyzed, relatively few (5.0%; N = 354) were newly admitted to the TDMHMR system in Fiscal Year 2004, including those at Texas Panhandle MHMR (10.4%; N = 159), Lubbock Regional MHMR Center (0.3%; N = 1), MHMR of Tarrant County (2.6%; N = 93), and Hill Country Community MHMR Center (6.0%; N = 101).

Table 2 presents the distribution of principal diagnoses among study participants at each R&DM implementation site. As the first and fourth rows show, most participants at Texas Panhandle MHMR and Hill Country Community MHMR Center had a principal diagnosis of Major Depressive Disorder. In contrast, the second row indicates that, at Lubbock Regional MHMR Center, Schizophrenia and related disorders was most common. Furthermore, as the third row reveals, among study participants at MHMR of Tarrant County, most had a principal diagnosis of Bipolar Disorder. Yet, the last row shows that, overall, Major Depressive Disorder was the most common principal diagnosis, followed by Bipolar Disorder, Schizophrenia and related disorders, and other diagnoses.

Table 2
Percent (%) and Number (N) of Study Participants at Each R&DM Implementation Site according to their Principal Diagnosis

R&DM Implementation Site	Principal Diagnosis							
	Schizophrenia and Related Disorders		Bipolar Disorder		Major Depressive Disorder		Other Diagnoses	
	%	N	%	N	%	N	%	N
Texas Panhandle MHMR	26.8%	412	18.6%	285	47.1%	723	7.6%	116
Lubbock Regional MHMR Center	45.7%	132	33.2%	96	14.2%	41	6.9%	20
MHMR of Tarrant County	30.0%	1,069	35.6%	1,269	32.2%	1,149	2.3%	81
Hill Country Community MHMR Center	21.5%	360	32.3%	542	40.9%	685	5.3%	89
Overall	27.9%	1,973	31.0%	2,192	36.8%	2,598	4.3%	306

Do the MCAS and Adult-TRAG Functional Impairment mirror each other across principal diagnoses?

Yes. Separate one-way ANOVAs yielded a main effect for Principal Diagnosis for MCAS total scores [$F(3, 7065) = 55.49, p < .001$] and Adult-TRAG Functional Impairment ratings [$F(3, 7065) = 34.29, p < .001$] at intake. Descriptive statistics for both the MCAS and Adult-TRAG Functional Impairment collected at intake are presented in Table 3 according to principal diagnosis and overall.

As can be seen in the last two rows, on average, MCAS total scores were significantly lower and Adult-TRAG Functional Impairment ratings were significantly higher at intake—both meaning worse functioning—among adult mental health consumers with either Schizophrenia and related disorders or other principal diagnoses compared to those with either Bipolar Disorder or Major Depressive Disorder ($p < .001$).

Table 3
Descriptive Statistics Including Mean (M), Standard Deviation (SD), and Range for the MCAS and Adult-TRAG Functional Impairment at Intake according to Principal Diagnosis and Overall

Measure	PRINCIPAL DIAGNOSIS														
	Schizophrenia and Related Disorders (N = 1,973)			Bipolar Disorder (N = 2,192)			Major Depressive Disorder (N = 2,598)			Other Diagnoses (N = 306)			OVERALL (N = 7,069)		
	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range
<i>MCAS</i>															
Interference with Functioning	18.50	3.75	5-25	19.23	3.50	5-25	19.11	3.37	5-25	17.73	3.94	5-25	18.92	3.57	5-25
Adjustment to Living	10.98	2.81	3-15	12.11	2.37	3-15	12.28	2.37	3-15	11.06	2.87	3-15	11.81	2.59	3-15
Social Competence	15.07	4.03	5-25	15.94	4.09	5-25	15.70	4.25	5-25	14.15	4.11	5-25	15.53	4.16	5-25
Behavioral Problems	17.05	3.01	4-20	16.83	2.93	4-20	17.26	2.67	4-20	15.65	3.27	4-20	17.00	2.89	4-20
Total	61.59	10.71	19-85	64.11	9.83	29-85	64.35	9.72	32-85	58.58	10.47	17-85	63.26	10.19	17-85
<i>Adult-TRAG</i>															
Functional Impairment	2.50	1.02	1-5	2.28	0.97	1-5	2.28	0.97	1-5	2.68	0.91	1-5	2.36	0.99	1-5

Do the MCAS and Adult-TRAG Functional Impairment mirror each other across level of care recommendations and authorizations?

Yes. One-way ANOVAs produced main effects for LOC-R and LOC-A for MCAS total scores [LOC-R: $F(4, 6373) = 363.39, p < .001$; LOC-A: $F(4, 6873) = 393.62, p < .001$] and Adult-TRAG Functional Impairment ratings [LOC-R: $F(4, 6373) = 639.22, p < .001$; LOC-A: $F(4, 6873) = 599.24, p < .001$] at intake. Descriptive statistics for the MCAS and Adult-TRAG Functional Impairment are displayed in Table 4 according to the LOC-R and LOC-A, all at intake. Of course, that main effects for both LOC-R and LOC-A emerged was not surprising, since there was a positive overall correlation between these two variables among study participants, $r(N = 7,069) = .51, p < .001$.

Across the LOC-Rs, the pattern of mean MCAS total scores mirrors the pattern of mean Adult-TRAG Functional Impairment ratings. As the last two rows in this section indicate, the mean MCAS total score was lowest [except for the nonsignificant difference between Crisis Services ($N = 167$) and Service Package 4 ($N = 188$) due to the relatively small number of participants with these LOC-Rs] and the mean Adult-TRAG Functional Impairment rating was highest at intake—both indicating worst functioning—among adult consumers whose LOC-R was Crisis Services ($p < .001$). Also, the mean MCAS total score was highest and the mean Adult-TRAG Functional Impairment rating was lowest at intake—both indicating best functioning—among adult consumers whose LOC-R was Service Package 1 ($p < .001$). In fact, the same pattern of results emerged across the LOC-As ($ps < .01$).

These findings are intuitive, since we would expect to find the worst level of functioning among persons with severe mental illness who are in crisis. In addition, we would expect to find the best level of functioning among those who have just been recommended, and are about to be authorized, for Service Package 1. After all, of Service Packages 1, 2, 3, and 4, Service Package 1 offers the least intensive bundle of community mental health services. Moreover, the fact that the MCAS total scores and Adult-TRAG Functional Impairment ratings mirror each other in these instances suggests, once again, that the MCAS and Adult-TRAG Functional Impairment dimension are opposite sides of the same coin.

Are the MCAS and Adult-TRAG Functional Impairment negatively correlated?

Yes. Correlations were computed between the MCAS and the Adult-TRAG Functional Impairment dimension among study participants at intake according to their principal diagnosis and overall, and the results are depicted in Table 5.

As Table 5 reveals, there is a significant negative correlation between each of the MCAS subscale and total scores and the Adult-TRAG Functional Impairment ratings among participants with Schizophrenia and related disorders, Bipolar Disorder, Major Depressive Disorder, and other diagnoses, as well as overall. These results again suggest that both the MCAS and Adult-TRAG Functional Impairment dimension are opposite sides of the same coin; whereas the MCAS measures functional ability, the Adult-TRAG Functional Impairment dimension assesses a lack of functional ability.

Table 4
Mean (M), Standard Deviation (SD), and Range for the MCAS and Adult-TRAG Functional Impairment at Intake according to the Intake Level of Care Recommended (LOC-R) and Authorized Level of Care (LOC-A)

Measure	Level of Care														
	Crisis Services			Service Package 1			Service Package 2			Service Package 3			Service Package 4		
	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range	M	SD	Range
LOC-R															
	(N = 167)			(N = 4,719)			(N = 119)			(N = 1,185)			(N = 188)		
<i>MCAS</i>															
Interference with Functioning	15.23	3.44	5-25	19.58	3.26	5-25	16.26	3.40	5-24	16.77	3.18	5-25	20.06	3.81	5-25
Adjustment to Living	10.35	2.76	3-15	12.18	2.40	3-15	11.51	2.33	6-15	10.43	2.60	3-15	12.65	2.48	3-15
Social Competence	12.49	3.72	5-24	16.10	4.03	5-25	13.93	3.12	6-22	13.45	3.42	5-25	12.94	3.74	5-24
Behavioral Problems	14.19	3.75	4-20	17.50	2.56	4-20	16.24	2.81	4-20	15.58	3.08	5-20	14.49	3.52	4-20
Total	52.26	9.66	25-81	65.35	9.19	19-85	57.95	6.72	32-71	56.23	8.30	29-82	53.78	10.14	29-77
<i>Adult-TRAG Functional Impairment</i>	3.63	1.01	1-5	2.08	0.89	1-4	3.08	0.51	1-4	3.26	0.52	1-5	3.13	0.83	1-5
LOC-A															
	(N = 162)			(N = 4,739)			(N = 119)			(N = 1,727)			(N = 131)		
<i>MCAS</i>															
Interference with Functioning	15.18	3.43	5-25	19.86	3.21	5-25	16.89	3.49	5-25	17.06	3.31	5-25	15.92	3.19	5-24
Adjustment to Living	10.38	2.76	3-15	12.33	2.39	3-15	11.71	2.06	6-15	10.70	2.57	3-15	9.16	2.63	3-15
Social Competence	12.40	3.70	5-24	16.31	4.13	5-25	14.22	3.55	7-24	14.04	3.59	5-25	11.97	3.03	5-20
Behavioral Problems	14.20	3.73	4-20	17.59	2.55	4-20	16.71	2.40	10-20	15.91	3.03	4-20	14.19	3.47	4-20
Total	52.17	9.58	25-81	66.09	9.31	19-85	59.53	7.20	41-75	57.71	8.79	29-83	51.24	8.97	29-71
<i>Adult-TRAG Functional Impairment</i>	3.62	1.02	1-5	2.03	0.89	1-4	2.89	0.73	1-4	3.05	0.73	1-5	3.27	0.82	1-5

Notes: 691 participants received an LOC-R = 9 (Not Eligible for Services) and 191 participants received an LOC-A = 9 (Not Eligible for Services) because they were not considered part of the Disease Management target population [i.e., Schizophrenia and related disorders, Bipolar Disorder, or Major Depressive Disorder with an intake Global Assessment of Functioning (GAF) rating ≤ 50]. Also, a rating of 5 on the Adult-TRAG Functional Impairment should have only been possible for an LOC-R and LOC-A = 0 (Crisis Services) among new admits at intake. WebCARE programming changes have since addressed this issue of “range.”

Table 5
Correlations between the MCAS and Adult-TRAG Functional Impairment at Intake according to Principal Diagnosis and Overall

	Adult-TRAG Functional Impairment				
	PRINCIPAL DIAGNOSIS				
	Schizophrenia and Related Disorders (N = 1,973)	Bipolar Disorder (N = 2,192)	Major Depressive Disorder (N = 2,598)	Other Diagnoses (N = 306)	OVERALL (N = 7,069)
<i>MCAS</i>					
Interference with Functioning	- .49	- .55	- .55	- .47	- .53
Adjustment to Living	- .43	- .42	- .39	- .39	- .42
Social Competence	- .46	- .46	- .48	- .37	- .47
Behavioral Problems	- .40	- .40	- .37	- .31	- .39
Total	- .57	- .61	- .60	- .53	- .60

Note: All correlations are significant at $p < .001$.

Discussion

As the Texas Department of Mental Health and Mental Retardation (TDMHMR) moves toward statewide implementation of its R&DM initiative, the Adult Mental Health Uniform Assessment must be streamlined, with duplicate assessment dimensions removed. After all, in a system constrained by limited resources, it is vital to distribute services in an efficient manner according to identified needs and appropriateness of the service modality.

Currently, TDMHMR's Mental Health Adult Uniform Assessment contains the MCAS (Barker et al., 1994), a well-established, 17-item measure of the *ability* to function in community settings among persons with severe mental illness, and *Dimension 4* of the Adult-TRAG (TDMHMR, 2003), *Functional Impairment*, a newly-developed, 1-item measure of the *lack of ability* to function in community settings among individuals with severe mental illness.

The goal of the present study was to determine if the MCAS and the Adult-TRAG Functional Impairment dimension are opposite sides of the same coin. Descriptive statistics, ANOVA techniques, and correlations were conducted using data from 7,069 adult mental health consumers collected at intake during Fiscal Year 2004, Quarters 1 through 2 (September 1-February 29) at four current R&DM sites (i.e., Texas Panhandle MHMR, Lubbock Regional MHMR Center, MHMR of Tarrant County, and Hill Country Community MHMR Center).

The results show that MCAS total scores and Adult-TRAG Functional Impairment ratings mirrored each other across principal diagnoses, LOC-Rs, and LOC-As. Moreover, there was a significant negative correlation between MCAS subscale and total scores and Adult-TRAG Functional Impairment ratings across principal diagnoses and overall.

Taken as whole, then, the findings of the current study suggest that the MCAS and the Adult-TRAG Functional Impairment dimension are, indeed, opposite sides of the same coin. So, omission of the MCAS (the longer of the two) from the Mental Health Adult Uniform Assessment for R&DM is therefore recommended.

Epilogue

In response to the recommendation from the present study, the MCAS (Barker et al., 1994), was omitted from the Mental Health Adult Uniform Assessment for R&DM that is slated for implementation at all LMHAs and their providers by September 1st, Fiscal Year 2005. One section of this new, streamlined Mental Health Adult Uniform Assessment contains the Adult-TRAG dimensions for assessment and an auto-calculated Adult-TRAG LOC-R, according to Version 2.1 of the User's Manual for the Adult-TRAG, hereafter referred to as the "Adult Texas Recommended Assessment Guidelines" (TDMHMR, 2004). This updated version includes minor editorial changes that were made to Version 2.0, and were presented at the *R&DM Regional Training* (April 2004) and the *R&DM Training at the Texas Council of MHMR Centers*

Conference (June 2004), after Version 2.0 was tested in the field at the four R&DM implementation sites during Fiscal Year 2004. We hope that this updated User's Manual for the Adult-TRAG will be useful, knowing that it was also produced after the reliability and validity study of Version 1.0 (Ruggiero, 2003) pointed to certain modifications that are still included as part of Version 2.1. Importantly, Dimension 4, Functional Impairment, is the same in Version 2.1 as it was in Version 2.0 of the User's Manual for the Adult-TRAG, and as it appears in this report (see pages 4-5).

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