

ACKNOWLEDGMENTS

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Table 1: MPAI-4 Items by subscales		
Ability Index	Adjustment Index	Participation Index
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0 9 9 \$ 4 9 8 : 4 T 3 : 4 + \$ 4 9 7 " 9 8 : 4 k	A \$ 4 % 8 9 8 K 8 9 D k 9 : k # 8 * ? k	S 7 " 4 % 6 : 7 9 " 9 8 : 4 k
) \$ # : 7 D k	% D # 6 9 : # % k	R : 7 G T k + . . : : * k
' C 4 ? k : = k > 4 = : 7 # " 9 8 : 4 k	> 4 " 6 6 7 : 6 7 8 " 9 \$ k % : + 8 " * k) : 4 \$ D k # " 4 " I \$ # \$ 4 9 k
H : K \$ * k 6 7 : ; * \$ # 2 % : * K 8 4 I k	8 4 9 \$ 7 " + 9 8 : 4 k	k
X 8 % C : % 6 " 9 8 " * k O ; 8 * 8 9 8 \$ % k	> # 6 " 8 7 \$? k % \$ * 2 " P " 7 \$ 4 \$ % % k	
/ 8 F F 8 4 \$ % % k	' " # 8 * D T % 8 I 4 8 = 8 + " 4 9 k	
	7 \$ * " 9 8 : 4 % . 8 6 % k	
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TEST MATERIALS AND USE

Test Materials

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8 4 = : 7 # " 9 8 : 4 k " ; : C 9 k 9 . \$ k 6 7 % : 4 k ; \$ 8 4 I k \$ K " * C " 9 \$? , k " 4 ? k 9 . \$ k + : 7 8 4 I k " 7 \$ " (S . \$ k 8 4 K \$ 4 9 : 7 D k . " % k ; \$ 4 k 9 7 " 4 % * " 9 \$? k
8 4 9 : k ' 7 \$ 4 + . , k V \$ 7 # " 4 , k / " 4 8 % . , k " 4 ? k A 6 " 4 8 % . (k k O * * k # " 9 \$ 7 8 " * k = : 7 k 9 . \$ k) - 0 > 2] , k 8 4 + * C ? 8 4 I k 9 . \$ k 9 7 " 4 % * " 9 8 : 4 % , k " 7 \$ k
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K\$7%8:4%k=:7k67:=-89,k=\$\$,k;"79\$7,k:7k97"?\$k8%k\$Y67\$%*Dk=:7;8??\$4(kk

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User Qualifications

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:9.\$7k?\$%8I4"9\$?k:;%7K\$7%kP.:kG4:Pk9.\$k84?8K8?C"*kP\$**(kkk-\$:6*\$kP89.kk\$7Dk%\$K\$7\$k+:I4898K\$k8#6"87#\$49k
%.:C*?k4:9k;\$kI8K\$4k9.\$k) - 0>(kk-7:=\$%8:4"*k%9"=k%.:C*?k7\$K8\$Pk9.\$k7"984I&IC8?\$*84\$%k67:K8?k84k9.8%k
#"4C"*k678:7k9:k#"G84I&7"984I%(kk-\$:6*\$kP89.k0 1>k:7k9.\$87kAJk%.:C*?k."K\$k"67:=\$%8:4"*kP.:k8%k
\$Y6\$78\$4+\$?kP89.k9.\$k) - 0>2]k7\$K8\$Pk9.\$k7"984I&IC8?\$*84\$%kP89.k9.\$#k678:7k9:k#"G84I&7"984I%k"4?k;\$k
"K"8*";*\$k9:k9.\$#k9:k"4%P\$7k"4D&eC%98:4%k9."9k#"Dk"78%\$k?C784I&9.\$8

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Basic Guidelines For Rating Children And Adolescents Using MPAI-P

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' :7&6.D%8+"*&"4?&+: I4898K\$&=C4+98:4%,&9. \$&7"9\$7& #C%9&+:4%8?\$7&9. \$&4:7# "*&?\$K\$*:6#\$49"*&67:+\$%&&
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3.8*?7\$4& P. :%\$&=C4+98:484I& 8%& 4:9& "9& " & 4:7# "*& *\$K\$*& \$Y6\$+9\$?& =:7&9. \$87& " I\$& "7\$& %+:7\$?& ^2],&
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Modifications:

Modifications for age range

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^(&5 \$%8?\$4+\$L&84?\$6\$4?\$49&*8K8

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MPAI-P	Adaptations for Scoring for Children and Adolescents
^(k) : ; 8*89Dk	0%%\$%%\$?k''%k6\$7k?\$K\$*: 6# \$49"*k4: 7# %kP89. k4: 7# ""*kI"89k""%C# \$?k 9: k; \$k"+. 8\$K\$?k; DkMkD\$"7%k
M(k@%\$k: =k. "4?%k	0%%\$%%\$?k''%k6\$7k?\$K\$*: 6# \$49"*k4: 7# k
O(kX8%8: 4k	0%%\$%%\$?k''%k6\$7k?\$K\$*: 6# \$49"*k4: 7# k

GUIDELINES AND EXAMPLES FOR RATING ITEMS OF THE MPAI-4 AND MPAI-P

1. Mobility: Problems walking or moving about including balance problems. S . 8% 89\$ # & ?\$ " *% & P 89 . & ? 8 = 8 + C * 98 \$ % & # : K 84 I k : 4 \$ % \$ * = k = 7 : # & 6 * " + \$ k 9 : k 6 * " + \$, k \$ 89 . \$ 7 k ; D & P " * G 84 I & P 89 . : C 9 k " % % 8 % 9 " 4 + \$, k P 89 . & " % % 8 % 9 " 4 + \$, k : 7 k # : K 84 I k " ; : C 9 k P 89 . & " % % 8 % 9 8 K \$ k ? \$ K 8 + \$ % & 84 + * C ? 84 I & " & P . \$ \$ * + . " 87 (& 1 " * " 4 + \$ k 67 : ; * \$ # % & " 7 \$ & 84 + * C ? \$? & 84 k 9 . 8 % &

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2. Use of Hands: Impaired strength or coordination in one or both hands.

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Nk H: 7 # "97\$4I9. &"4?k+: : 7?84"98: 4k; ; 9. &: 4k+*848+*"&SY" # 84"98: 4k" P\$**&"%&84k"+98K898\$%k: =k?"8*Dk
8K84I&P89. &: ; 9. &. "4?%(kk' : 7k+. 8?7\$4,&C%\$k: =k. "4?%&8%&"9k?\$K\$*: 6 # \$49"*k4: 7 # (kk 3 . 8*?7\$4k"4?k
"? : *\$%+\$49%&P . : &"7\$&4: 9k"9k"4kSY6\$+9\$?k*\$K\$*k=: 7k9. \$87k" I&C% . : C*?k; \$&%+: 7\$?k^2], k?\$6\$4?\$49k: 4k
9. \$&8 # 6"+9k: =k9. \$87k67: ; *\$ # k" %&6\$7k9. \$&%+: 784I&IC8?\$*84\$%(k

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^k - 7: ; *\$ # %&P89. &?\$Y9\$789Dk: 7k%6\$S?&84k: 4\$&: 7k; ; 9. &. "4?%&"7\$&"66"7\$49k: 4k+*848+*"&SY" # 84"98: 4(kk
< : P\$K\$7,&9. \$%\$&67: ; *\$ # %&? : k4: 9k849\$7=\$7\$&C; %9"498"*D&P89. &"+98K898\$%k: =k?"8*Dk*8K84I(kk>9k8%&
6: %&8; *\$,&"*9. : CI. &C4*8G\$*D,&9. "9k%: # \$&84?8K8?C"*%&"9k9. 8%&*\$K\$*k*"+Gk+: # 6*\$9\$&: 7k%C; %9"498"*&C%\$k
: =k: 4\$&. "4?k67: K8?\$?&9. "9k9. \$87k"?"69"98: 4k7\$eC87\$%&4: &\$Y9\$74"*k"%8%9"4+\$&

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Mk > # 6"87 # \$49k849\$7=\$7\$%&: # \$&; C9k4: 9k9. \$& # "Z: 789Dk: =k9. \$&k9 # \$(kkBY" # 6*\$%k: =k9. 8%&*\$K\$*k: =k
8 # 6"87 # \$49k"7\$&67: K8?\$?&: Dk9. : %\$&P . : k7\$eC87\$""%&8%9"4+\$&84k" k=\$P k"+98K898\$%&C+ . k"%, k+C9984I&C6k
9. \$87k=: : ? , k: 7kP . : k"7\$&C4"; *\$k9: k6"798+86"9\$&84k" k=\$P k"+98K898\$%& ; \$+"C%\$k: =kC66\$7k\$Y97\$ # 89Dk
8 # 6"87 # \$49k*8G\$&6*"D84I&"&I" # \$&: =k+"9+ . (k

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""%8%9"4+\$&P89. & # "4Dk""%6\$+9%k: =k84%97C # \$49"*k"+98K898\$%k: =k?"8*Dk*8K84I(kkBY" # 6*\$%k: =k9. 8%&*\$K\$*k
: =k8 # 6"87 # \$49k"7\$&67: K8?\$?&: Dk9. : %\$&P . : k"7\$&"; *\$k9: k?7\$%&9. \$ # %*K\$&84?\$6\$4?\$49*D, k: 7k
"* # : %9k84?\$6\$4?\$49*D, k; C9k4\$S?&"%8%9"4+\$&P89. & # : %9k: 9. \$7k"+98K898\$%&P . 8+ . k7\$eC87\$&=84\$7k # : 9: 7k
?\$Y9\$789D, k%C+ . k""%&P78984I, k%9kC6k=: 7k # \$"*% , k: 7k: 6\$484I&? : : 7%(k

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]k 0 %8%9"4+\$&8%&7\$eC87\$?&84k"*k: 7k"* # : %9k"*k"+98K898\$%k: =k?"8*Dk*8K84I& ; \$+"C%\$k: =kC66\$7k\$Y97\$ # 89Dk
8 # 6"87 # \$49(kkSD68+**D&84?8K8?C"*%&"9k9. 8%&*\$K\$*k"7\$&C4"; *\$k9: k?7\$%&P89. : C9k""%8%9"4+\$&(kk) "4Dk
"+98K898\$%&9. "9k7\$eC87\$&9. \$&C%\$k: =k. "4?%&C+ . k"%, kP78984I& : 7kC%84I&C9\$4%8%&=: 7k\$"984I, k+"44: 9k; \$&
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3. Vision: Problems seeing; double vision; visual field deficits; other eye, brain, or nerve injuries that interfere with seeing.

X8% C" *k?8%9C7; "4+\$%kP . 8+ . k"7\$?C\$?k9 : k6\$7+\$69C" *k?8% : 7?\$7%k7"9 . \$7k9 . "4k
8 # 6"87 # \$49k : =k9 . \$k678 # "7D&K8% C" *k%D%9\$ # k% . : C*?k ; \$k7"9\$?kC4?\$7k89\$ # k^M&[K8% C : %6"98" *k" ; 8*898\$% \ (kk ' : 7k
\$Y" # 6*\$, kK8% C" *k4\$I* \$+9k% . : C*?k ; \$k7"9\$?kC4?\$7k89\$ # k^M, k8=k9 . \$7k8%k4 : k=8\$*?k+C9k : 7k6\$786 . \$7" *kK8% C" *k
?8%9C7; "4+\$(k

Nk H : 7 # " *k4\$ "7k" 4?k+* : %\$kK8%8 : 4kP89 . k9 . \$kC%\$k : =k+ : 77\$+98K\$k*\$4%\$% , k67 : K8?84I k9 . "9k9 . \$k+ : 77\$+98K\$k
\$4%\$%k P\$7\$&4 : 9k # " ?\$k4\$+\$% "7Dk ; Dk9 . \$k84ZC7D(k ' : 7k+ . 8?7\$4k"4?k" ? : *\$%+\$49% , kK8%8 : 4k8%k"9k
?\$K\$* : 6 # \$49" *k4 : 7 # (kk 3 . 8*?7\$4k"4?k" ? : *\$%+\$49%kP . : k"7\$&4 : 9k"9k"4k\$Y6\$+9\$?k*\$K\$*k= : 7k9 . \$87k" I \$k
% . : C*?k ; \$k%+ : 7\$?k^2] , k?\$6\$4?\$49k : 4k9 . \$k8 # 6" +9k : =k9 . \$87k67 : ; *\$ # k" %k6\$7k9 . \$k%+ : 784I kIC8?\$*84\$% (k

H : 7 # " *k" +98K898\$%k : =k? "8*Dk*8K84I k"7\$&" ++ : # 6*8% . \$?k

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5. Dizziness:&&

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6. Motor speech: Abnormal clearness (articulation, phonati

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7A. Verbal Communication: Problems expressing thoughts through language or understanding such expressions from others.

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N& H: 7 # " *K\$7; " *k+: # # C48+"98: 4k%G8**%, &9. "9k8%, k%6\$"G84I, &P78984I, k*8%9\$484I(k' : 7k+. 8*?7\$4k"4?k
"? : *\$%+\$49%, kK\$7; " *k+: # # C48+"98: 4k8%k"9k? \$K\$* : 6 # \$49"*k4: 7 # k P89. k+*\$"7k+: # # C48+"98: 4k
\$Y6\$+9\$?k ; Dk" I\$ k] (kk 3 . 8*?7\$4k"4?k" ? : *\$%+\$49%kP . : k"7\$4: 9k"9k"4k\$Y6\$+9\$?k*\$K\$*k=: 7k9. \$87k" I\$ k
% . : C*?k; \$k%+: 7\$?k^2], k? \$6\$4? \$49k: 4k9. \$k8 # 6" +9k=: k9. \$87k67: ; *\$ # k" %k6\$7k9. \$k%+: 784I&IC8?*\$84\$(k

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^k) 8*?k8 # 6"87 # \$49%k84k*"4IC" I\$ k [8(\$, kP: 7?k=84?84I&: 7k4" # 84I&67: ; *\$ # % \k9. "9k?: k4: 9k849\$7=\$7\$ k
%8I48=8+"49*Dk P89. k+: 4K\$7%"98: 4" *k"4?k=C4+98: 4" *k+: # # C48+"98: 4(k

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M&) 8*?k? \$=8+89%k84k9. \$kC%\$k: =k*"4IC" I\$ k849\$7=\$7\$ k P89. k=C4+98: 4" *k+: # # C48+"98: 4k% : # \$k; C9k4: 9k9. \$k
"Z: 789Dk: =k9. \$k98 # \$(k&BY" # 6*\$%k"7\$ kSY. 8; 89\$?k; Dk9. : %\$kP . : k"7\$ k"6. "%8+k: 4k=: 7 # " *k\$K" *C"98: 4k
; C9kP . : %\$k+: # # C48+"98: 4k8%k=C4+98: 4" *k=: 7k+: 4K\$7%"98: 4" *k6C76: %\$%gk"6. "%8" k8%k"66"7\$49k: 4*Dk
P. \$4k+: # # C48+"98: 4k; \$+: # %\$k # : 7\$ k+: # 6*\$Y, k: 7k9. : %\$kP . : %\$k*"4IC" I\$ k8 # 6"87 # \$49k8%k
+: 4=84\$?k9: & P78984I&: 7k4" # 84I(k

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O&) 8*?k9: k # : ?\$7"9\$ k"6. "%8" k849\$7=\$7\$%k # C+ . k: =k9. \$k98 # \$k P89. k849\$76\$7%: 4" *k+: # # C48+"98: 4(k
O?C*9%, k" ? : *\$%+\$49%, k"4?k+. 8*?7\$4k"9k9. 8%k*\$K\$*k: =k8 # 6"87 # \$49kC"C" *Dk"7\$ k4: 9k" ; *\$k9: k\$4I" I\$ k
\$=\$+98K\$*D&84k+: 4K\$7%"98: 4" *k849\$7+. "4I\$ k P89. : C9k%8I48=8+"49k. \$*6k=7: # k: 9. \$7k6\$: 6*\$k84K: *K\$?k
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7B. Nonverbal Communication: Problems expressing thoughts through gestures, facial expression, or other nonlanguage behaviors or understanding such expressions from others.

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8. Attention/Concentration: Problems ignoring distractions; difficulty shifting attention from one thing to another; difficulty sustaining attention.

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9. Memory: Problems learning and recalling new information

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10. Fund of information: Problems remembering information learned in school or on the job or general knowledge about the world; difficulty remembering information about self and family from months to years ago.

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11. Novel problem-solving: Problems generating solutions or picking the best solution to new problems. H:K\$*67: ;*\$#2%:*K84I&84&9.8%&+:49\$Y9&7\$=\$7%&678#"78*D&9: &+:4+\$69C"*&67: ;*\$#%&7"9.\$7&9."4&849\$76\$7%:4"*&67: ;*\$#%(&&>#6"87# \$49&84&+:4+\$69C"*&67: ;*\$#2%:*K84I&"4?&7\$"%:484I&#"D&849\$7=\$7\$&P89.& %:*K84I&849\$76\$7%:4"*&:7&:9.\$7&*8=\$&67: ;*\$#%(&&<:P&K\$7,&# :98:4"*&8%&C\$%&#"D&"*%: &849\$7=\$7\$&P89.& &67: ;*\$#2%:*K84I&84&7\$*"98:4% .86%&"4?&7\$"*&*8=\$&89C"*98:4%(&&' :7&84%9"4+\$,&6\$:6*\$&P89.& &C48#6"87\$?&:7& \$K\$4&%C6\$78:7&7\$"%:484I&" ;8*89D&#"D&\$Y\$7+8%\$&6: :7&ZC?I # \$49& ;\$+"C%\$&9.\$D&"7\$&"4I7D&"9&: # \$:4\$&:7& " ;:C9&: # \$9.84I(&&S: &9.\$&\$Y\$49&6: %&8; *\$,&9.8%&89\$ # &7"9\$%&:4*D&9.\$&9.84G84I&"4?&+:4+\$69C"*&7\$"%:484I& 6"79&:=\$&67: ;*\$#2%:*K84I(&&B# :98:4"*&"4?& ;\$. "K8:7"*&="+9:7%&& . :C*?& ;\$&7"9\$?&C4?\$7&"667:678"9\$& %C; %eC\$49&89\$ # %(&&O*%: &84+*C?*\$?&84&9.8%&+"9\$I:7D&8%&9.\$&"; 8*89D&9: &+:4+\$69C"*D&:7I"48F\$&84=:7#"98:4& "4?&" +98K898\$%,&9: &6*"4,& &4?&9: &?&K\$*:6&"4?&#"849"84&"&D%9\$#"98+&6\$7%:4"*&+.\$?C*\$(&

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12. &Visuospatial abilities:&&

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13. Anxiety: Tense, nervous, fearful, phobic, symptoms of posttraumatic stress disorder such as nightmares, flashbacks of stressful events.

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14. Depression: Sad, blue, hopeless, poor appetite, poor sleep, worry, self-criticism.

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17. Fatigue: Feeling tired, low in energy; fatigability, that is, feeling low in mental or physical energy after a relatively low level of mental or physical activity. && "98IC\$& # "D& ; \$&"&%D # 69 : # & : =&
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18. Sensitivity to mild symptoms: Focusing on posttraumatic cognitive, physical or emotional

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19. Inappropriate social interaction: Acting childish, silly, rude; behavior not consistently fitting to the time and place or age-appropriate.
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20. Impaired self-awareness: Lack of recognition of personal limitations and disabilities and how

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21. Family/significant relationships: Interactions with close others.

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24. Leisure and recreational activities: Involvement in hobbies, sports, and other active and passive activities primarily for enjoyment either alone or with others.

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25. Self-care: Eating, dressing, bathing, hygiene. S . 8%89\$ # k+ : 4%8? \$7%k9 . \$k" # : C49k : =k84? \$6\$4? \$4+\$k
P89 . k P . 8+ . k ; "%8+k%\$*-2+"7\$kk"+98K898\$%kk"7\$kk6\$7=: 7 # \$?k84+*C?84Ikk"984I, k ; "9 . 84I, k?7\$%84I, k"4?k : 9 . \$7k
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26. Residence: Responsibilities of independent living and homemaking (such as, meal preparation, home repairs and maintenance, medication management, and personal health maintenance beyond basic hygiene (see #25) but not including managing money (see #29)).

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8%&C4" ; *\$&9 : &P : 7G&=C*298 # \$& : C9%8? \$&9. \$&. : # \$(&BeC8K"*\$49&9 : &"&+ : 7\$& : =&b& : 7&ck : 4&9. \$&A5A&=: 7&
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27. Transportation: Independence in moving oneself outside of the home in the community. In rating this item, consider ability to perform these activities without assistance as well as environmental limitations.

28A. Paid employment. Work for pay. O**k: 9. \$7k+"9\$I: 78\$%k: =k67: ?C+98K\$&" +98K89D&"7\$&7"9\$?&C4?&7&MQ 1 &
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6\$7%: 4& . : C*?&; \$&7"9\$?&: 7&9. \$& . : +8"*&7: *\$&9. "9&"66\$"7%&678 # "7D&"%&84?8+"9\$?&; D&9. \$&7\$*"98K\$&" # : C49&: =&
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"4?&\$"7*D&"?: *\$%+\$49%& P8**&; \$&7"9\$?&C4?&7&MQ 1 &=: 7&9. \$87&6"798+86"98: 4&84&+. . : *&" +98K898\$%&\$K\$4&8=&9. \$D&
"7\$&P: 7G84I&6"79298 # \$&=: 7&6"D(&& O 4: 9. \$7&\$Y" # 6*\$&8%&67: K8?&\$?&; D&"&P: 7G84I& # : 9. \$7&P. : &P: 7G%&=C**&
98 # \$&=: 7&6"D(&&S. 8%&6\$7%: 4&P: C*?&; \$&7"9\$?&C4?&7&MQ O &[- "8?&\$ # 6*: D # \$49)\&& J 4&9. \$&: 9. \$7&. "4?, &"&
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"9&. : # \$&P: C*?&; \$&7"9\$?&%"&h. : # \$ # "G\$7i&C4?&7&MQ 1 (&& O 4&: *?&7&"?: *\$%+\$49&: 7&"?C*9&9C?&49&P. : &8%&
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C4?&7&MQ 1 (&& O &6\$7%: 4&P. : &8%&84&7\$. " : 8*89"98: 4&84&: 7?&\$7&9: &7\$9C74&9: &"&K"*C\$?&: +8"*&7: *\$&P: C*?&; \$&7"9\$?&
: 4&9. \$&678 # "7D&7: *\$&9: &P. 8+. &9. \$D&P8% . &9: &7\$9C74(&&>4&: 9. \$7&P: 7?%, &"4&C4\$ # 6*: D\$?&6\$7%: 4&P. : &8%&
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' : 7& : : 9. &MQ O &"4?&MQ 1 ,&h% C66: 79i&=: 7&\$ # 6*: D # \$49&

28B. Other employment. Unpaid work, such as, formal schooling, volunteer work, homemaking, and retirement for those over age 60.

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O N k . : C 7 % k : = k 7 \$ % 6 : 4 % 8 ; 8 * 8 9 D k \$ " + . & P \$ \$ G (k & k > 4 k " * # : % 9 k " * k + " % \$ % , k = C * * k 9 8 # \$ k . : # \$ # " G 8 4 I k 8 4 + * C ? \$ % k + . 8 * ? k
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§ >4?\$6\$4?\$49&kK : *C49\$7&P : 7Gk= : 7k # : 7\$&9 . "\$\$77

29. Managing money and finances: Shopping keeping a checkbook or other bank account, managing personal income and investments.

7\$=\$7%&9: & # "4" I84I&6: +G\$9& # : 4\$D&: 7&"4&"** : P"4+\$(& ' : 7&6C76: %\$%&: =&9 . 8%&89\$ # ,&h% . : 6684Ii&7\$=\$7%&9: &9 . \$&
use of money&84&" +eC8784I&I: : ?%(&& J 9 . \$7&"% 6\$+9%&: =&% . : 6684I, &8(\$, &" +eC8784I&%C=8+8\$49&I: : ?%&9: &
"849"84&9 . \$& . : C%\$. : *?&"7\$&+ : 4%8?&7\$?&C4?&7&h84?&6\$4?&49&*&8K84I(i&&>4&7"984I&9 . 8%&89\$ # &=: 7&"?C*9% ,&
+ : 4%8?&7"98: 4&8%&I8K\$4&9: &P . \$9 . \$7&9 . \$&" # : C49&: =& # : 4\$D& ; \$84I& # "4" I\$?&8%&& # ""**&: 7&* "7I\$(&& O ?C*9%&P . : &
"7\$&" ; *\$&9: & # "G\$&% # ""**&6C7+ . ""\$%&P89 . &7\$*"98K\$*D&% # ""**&" # : C49%&: =& # : 4\$D&=: 7&+* : 9 . \$% ,& I7: +\$78\$%&: 7&
: 9 . \$7&6\$7% : 4"*&89\$ # %& ; C9&P : C*?& ; \$&"9&78%G&=: 7& # "4" I84I&*"7I\$7&" # : C49% ,&C4" ; *\$&9: & # "G\$&67C?&49&

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Pre-existing and Associated Conditions

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; \$+"C%\$&9. \$D&?: &4: 9&7\$67\$%\$49&?87\$+9&: 7&9D68+"*&: C9+: # \$%&=: &0 1>(&&5 "%+. &"4"*D%\$%&. "K\$&?S# : 4%97"9\$?&9. "9&
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H: 4\$9. \$*\$%%, &9. \$%\$&8Y&"??898: 4"*&89\$ # %&?S=84\$&=" +9: 7%&9. "9&"7\$&8 # 6: 79"49&9: &+: 4%8?S7&84&6*"4484I&
7\$. "; 8*89"98: 4&: 7&: 9. \$7&849\$7K\$498: 4%&P89. &6\$: 6*\$&"=9\$7&0 1>(&&S. \$&67\$%\$4+\$&: &="4D&=: &9. \$%\$&=" +9: 7%& # "D&
84?8+"9\$&9. "9&9. \$&6\$7%: 4&; \$84I&\$K"*C"

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31. Drug Use: Use of illegal drugs or abuse of prescription drugs both before and after injury. & 0 % &
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32. Psychotic symptoms: Hallucinations, delusions, other severe distortions of reality S . \$k? \$17\$ \$k
9: k P . 8+ . k% C+ . k% D # 69: # %k P \$7 \$k 67\$ % \$49k ; \$ = : 7 \$k 84ZC7Dk " 4 ? k " 7 \$k 67\$ % \$49k " = 9 \$7k 84ZC7Dk % . : C * ? k ; \$k 7 " 9 \$? (k k S . 8 % k
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Mk AD # 69: # % k \$ # \$ 7I \$ k 84 = 7 \$ e C \$ 49 * Dk " 4 ? k 8 : (") 12 (*) - 1 (*) - 1 (D) 12 \$ k (8) 12 (4) - 1 (9) - 1 (\$) 14 1 % C = \$ 7 \$ k P :

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33. Law violations: Preinjury or postinjury history of conviction for legal infractions. &

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34. Other conditions causing physical impairment: Physical effects of other conditions that were present prior to brain injury, resulted from nonbrain injuries, or occurred after the injury.
BY" # 6*\$%&"7\$&%684"*&+: 7?&84ZC7D,&" # 6C9"98:4,&"4?&# "4D&:9. \$7&?8%\$"%\$%&"4?&+: 4?898:4%&9. "9&7\$%C*9&84&
6.D%8+"*&8 # 6"87 # \$49(&S. \$&6.D%8+"*&8 # 6"87 # \$49&% . : C*?&4:9&; \$&\$89. \$7&9. \$&?87\$+9&: 7&84?87\$+9&7\$%C*9&: =&9. \$&
; 7"84&84ZC7D(&& ' : 7&84%9"4+\$,&8 # 6"87 # \$49&"% : +8"9\$?&

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35. Other conditions causing cognitive impairment: Cognitive effects of other conditions that were present prior to brain injury, resulted from nonbrain injuries, or occurred after the injury.
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**SCORING, REFERENCE DATA,
&
AND TEST INTERPRETATION**

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Scoring: for adults, adolescents and children

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+:4K\$7%8:4%k=:7k84K\$49:78\$%k+:#6*\$9\$?k;Dk"?C*9%kP89.k01>k[066\$4?8Yk>>>\k:7kAJk[066\$4?8Yk>X\k"7\$
"K"8*";*\$k:4*Dk=:7k9.\$k)"D:k%"#6*\$k(kk-7:+\$?C7\$%k=:7kT-scorek+:4K\$7%8:4k"7\$?%+78;\$?k84k#:7\$?9"8*k84k9.\$k
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"4?k) "D: 25 : +. \$%9\$7(kk3 . "7"+9\$78%98+%k : =k9. 8%kH"98: 4"*k%" #6*\$k"7\$?%+78; \$?k84kS"; *\$kM(kk / "9" k=: 7k9. \$k
%\$+: 4?k%" #6*\$k=: 7k"?C*9%k\$K"*C"9\$?k : 4*Dk"9k) "D: 25 : +. \$%9\$7k84+*C?%k7"984I%k # " ?\$k ; Dk%9" =, k6\$: 6*\$kP89. k
0 1>, k"4?k9. \$87kkAJ (kk3 . "7"+9\$78%98+%k : =k9. \$k) "D: k%" #6*\$k"7\$?%+78; \$?k84kS"; *\$kO(kkk

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7\$=\$7\$4+\$k9: k\$89. \$kH"98: 4"*k : 7k9. \$k) "D: k%" #6*\$k: 7k; : 9. (kkS"; *\$%k=: 7kT-scorek+: 4K\$7%8: 4k7\$=\$7\$4+\$?k9: k
9. \$kH"98: 4"*k%" #6*\$k"7\$&67: K8?\$?k84k

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H"98:4"*kT-scorekqk]Mgk)"D:kT-scorekqk]b\k4:984I*?k67:;*\$#%kP89.k."4?%,k4:4K\$7;"*k+:# #C48+"98:4,k
"4?k4:K\$&k67:;*\$#2%:*K84I,k"4?k#:7\$&8I48=8+"49k67:;*\$#%kP89.k"99\$498:4k"4?k#\$#:7D(kkA:+8"*k"4?k
\$#:98:4"*k"?ZC%9#\$49,k%\$=2"P"7\$4\$%%,k"4?k=#8*Dk%C66:79kP\$7\$&ZC?I\$?k9:;k&7\$*"98K\$*D&I::?,k7\$%C*984I&k84k"kk
*:Pk%+:7\$&:4k9.\$kO?ZC%9#\$49k>4?Yk[7"Pk%+:7\$&qk^cgkH"98:4"*kT-scorekqkOagk)"D:kT-scorekqkON\k
5\$%978+98:4%kP\$7\$&4:9\$?k:4k9.\$k-"798+86"98:4k>4?Yk,k.:P\$K\$7,k84k%:+8"*k"4?k7\$+7\$"98:4"*k84K:*K\$#\$49,k
84?\$6\$4?\$49k*8K84I,k97"4%6:79"98:4,k"4?k#:4Dk#"4"IS#\$49(kk!"4\$&P"%k"*%:kC4\$#6*:D\$?(kk<\$7k%+:7\$&:4k9.\$k
-"798+86"98:4k>4?YkP"%k"*%:k84k9.\$k#8*?k9:;k#:7"9\$&7"4I\$&[7"Pk%+:7\$&qk^cgkH"98:4"*kT-scorekqk]bgk)"D:k
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#\$9.:?%k9:k+:#6\$4%"9\$&=:7k+:I4898K\$&k67:;*\$#%,k678#"78*Dk9.7:CI.&C%\$&:=k"kh#:#:7Dk4:9\$;;:G,i&"%kP\$**k"%k
84k"4C#;\$7k:=k=C4+98:4"*k"7\$"%k9."9k84+*C? \$?k84+7\$"84I&#: +8"*k"4?k*\$8%C7\$&"+98K898\$%,k84?\$6\$4?\$49k*8K84I&
"4?k#:4Dk#"4"IS#\$49k%G8**%,k"4?kK:+ "98:4"*k7\$.";8*89"98:4(kk5\$2\$K"*C"98:4kP89.k9.\$k) -O>2]kP"%k?:4\$&
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MPAI DEVELOPMENT AND PSYCHOMETRIC CHARACTERISTICS

Development

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?:+C#\$49"98:4k:=k9. \$kK"78\$9Dk:=k+: I4898K\$,k;\$."K8:7"*k"4?k%:+8"*k+. "**\$4I\$%k9."9k="+\$k#"4Dk6\$:6*\$kP89.k
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=:7k7"984I⌘6"84k"4?k%6\$+8=8+k"7\$"%k:=k+: I4898K\$⌘8#6"87#\$49(kkS.\$k7\$%C*984I⌘k+"*\$,k9.\$k) "D:2-:79*"4?k
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7\$%8?C"*kK"*C\$%&:=k\$Y6\$+9\$?& #84C%&" +9C"*kK"*C\$%& : =k"4k89\$ # (*Inf&it&67:K8?\$%&"# :7\$&P\$8I.9&9:k"+9C"*kK"*C\$%&*
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7\$*8"; 8*89D&+: C*?&; \$&8 # 67: K\$?&; D&=C79. \$7&7\$=84\$ # \$49& : =&9. \$&89\$ # &7"984I&%+"*\$%(&&S : &"++ : # 6*8% . &9. 8%, &P\$&
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9.7: CI. : C9(&&A: # \$&89\$ # %&84&9. \$& : 78I84"*&K\$7%8: 4&[%6\$+8=8+"**D, &- %D+ . : 98+&AD#69: # %, &O*+: . : *&@%\$, & / 7CI&
@%\$, &E" P&X8: * "98: 4% \& P\$7\$&=: C4?&4: 9&9: &+: 4978; C9\$&%6\$+8=8+"**D&9: &9. \$& # "\$%C7\$ # \$49& : =&9. \$& : C9+: # \$& : =&
0 1>(&&S . \$%\$&89\$ # %& P\$7\$&7\$9"84\$?&"9&9. \$& \$4?& : =&9. \$&) - O>&M(O&; \$+"C%\$, &P . \$4&67\$%\$49, &9. \$D& : ==\$7&84=: 7 # "98: 4&
9. "9&8%&8 # 6: 79"49&84&?\$K\$*: 684I&%\$7K8+\$&6*"4%(&&< : P\$K\$7, &9. \$%\$&89\$ # %&? : &4: 9&+: 4978; C9\$&9: &9. \$&) - O>&%+: 7\$&
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84&E: C8%8"4" ^1&% . : P\$?&&Y+\$**\$49& - \$7% : 4&5 \$*8"; 8*89D&[(dM\, &- \$7% : 4&A\$6"7"98: 4&q&o(]d, &>9\$ # &5\$*8"; 8*89D&[(da\&
"4?&>9\$ # &A\$6"7"98: 4&[(a)\(&&O &a26: 849&%+"*\$&"66\$"7\$?&9: &; \$%9&7\$67\$%\$49&9. \$&7"4I\$& : =&84?8K8?C"*&89\$ # &

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R "*"%,&"4?&) "D: &3*848+&+:4=87# \$?&9. \$&84

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Table 5: Full Scale: reliability and separation (Mayo sample; n =134)				
	Person Reliability	Person Separation	Item Reliability	Item Separation
Person with ABI	(dM _k)	0(O [^] _k)	(db _k)](dc _k)
SO	(dM _k)	0(0c _k)	(d] _k)	0(Q] _k)
Staff	(Qb _k)	M(] _k d _k)	(dQ _k)	b(Q [^] _k)
3-Rater Composite	(d] _k)	0(Qb _k)	(dd _k)	^(N _k b _k)

Table 6: Ability Index: reliability and separation (Mayo sample; n =134)				
	Person Reliability	Person Separation	Item Reliability	Item Separation
Person with ABI	(Q] _k)	M(ON _k)	(dc _k)	a(bb _k)
SO	(Q] _k)	M(O [^] _k)	(d0 _k)	0(bQ _k)
Staff	(Q [^] _k)	M(Nd _k)	(dQ _k)	b(cM _k)
3-Rater Composite	(Qb _k)	M(aM _k)	(dd _k)	^M(dd _k)

Table 9: Percent exact agreements and agreements within 1 point between rating groups on individual items (Mayo sample; n =134)

People with ABI and SO	SO and Staff	People with ABI and Staff	All Rater Pairs
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?\$#:4%97"9\$?&9."9&9.\$&:78I84"*&A9"==&) - 0>&[χ^Mq&Q(ON,&6&1(N^&1"4?&98# \$&%84+\$&84ZC7D&[χ^Mq&d(cN,&6&1(N^&1
P\$7\$&9.\$& ;\$%9&67\$?8+9:7%&[bd k &+: 77\$+9&+*"%%8=8+"98:4&=:7&C**&# : ?\$*\& : =&Z: ;&6*" +\$ # \$49&=: **: P84I&
6"798+86"98:4&84&"&K: + "98:4"*&7\$. " ; 8*89"98:4&67: I7" #&? \$%8I4\$?&%6\$+8=8+"**D&=: 7&6\$: 6*\$&P89. &0 1>(&& J 9. \$7&
6: 9\$498"*&67\$?8+9:7%&84+*C? \$?&84&9. \$&# : ?\$*&9. "9&?8?&4: 9&+: 4978; C9\$&9: &9. 8%&67\$?8+98:4&P\$7\$&" I\$,&\$?C+"98:4,&
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>4&"4:9.\$7&%9C?D,^Q&9.\$&:78I84"*&A9"==&) - 0>&P"%&9.\$& ;\$%9&67\$?8+9:7& : =&* : 4I&9\$7# &K: + "98:4"*&"4?&
84?\$6\$4?\$49&*8K84I&: C9+ : # \$&=: **: P84I&"&+: # 67\$. \$4%8K\$&?"D&7\$. " ; 8*89"98:4&67: I7" #&=: 7&6\$: 6*\$&P89. &0 1>(&&
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9. "9&9. \$&) - 0>&"* : 4\$&67\$?8+9\$?&K: + "98:4"*&9"9C%& : 4\$2D\$"7& "=9\$7&67: I7" #&6"798+86"98:4&[+ : 77\$+9&
+*"%%8=8+"98:4&q&bc k g&χ^Mq&a(00,&6&1(Na\(&&E: I8%98+&7\$I7\$%&8: 4&"4"*D%8%& : =&9. 8%&" # \$&%\$9& : =&67\$?8+9: 7&
K"78" ; *\$&"%& : &=: C4?&9. \$&) - 0>&P"%&9.\$& : 4*D&%8I48=8+"49&67\$?8+9:7& : =&84?\$6\$4?\$49&*8K84I&9"9C%& : 4\$&D\$"7&
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Item cluster analysis. <8\$7"7+.8+"*&+*C%9\$7&"4"*D%8%&:=&89\$#%&P89.&9.\$&R"7?2<::G&) \$9.:?&67:?C+\$?&?"&
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:K\$7*"66\$?&+:4%8?&7";*D&P89.&7"98:4"*&I7:C6%(&O&+: #6"78%:4&:=&89\$#2%C;%+"*\$&+:77\$*"98:4%&=-:7&89\$#%&
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%9"98%98+"*&"?K"49" I\$&9:&# :K84I&"4D&89\$#&9:& &"&?8=\$7\$49&I7:C6&[%\$&S";*\$%&^N&"4?&^&^\(&

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Abilities	Adjustment	Participation
Mobility	Anxiety	
Use of hands	Depression	
Motor speech	Irritability, anger,	
Communication	Aggression	
Fund of information	Pain and headache	
Visuospatial abilities	Fatigue	
/ 8FF84\$%%T; "*"4+\$&[(]^&	Sensitivity to mild	
X8%8:4&[(Oc\u&		
OC?898:4&[(^c\&		
099\$498:4T+:4+\$497"98:4&		
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Table 11: Content and Internal Consistency of Empirical MPAI-4 Subscales Derived from Cluster Analysis (Ward-Hook Method)†		
Abilities	Adjustment	Participation

Table 12: Rotated factor structure of the MPAI-4

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' C4?& : =&84 = : 7 # "98 : 4(&			
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) - 0>2],&7\$I"7?*\$%&:=&7"984I&:%C7+\$&[%\$\$&S";*\$&a2d(\&&H:4\$9.\$*\$%&,&?9"8*\$?&84%6\$+98:4&:=&?"9"&:;9"84\$?&
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6: %898K\$&%\$*=2\$K"*C"98:4, &"4?&"%687"98:4"*&;8"%&:4&9.\$&6"79&:=&9.\$&6\$7%:4&P89. &0 1>g&"?K:+"+D&"4?&%\$4%898K89D&
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7\$67\$%\$49&9.\$&?8=\$784I&6\$7%6\$+98K\$%&:=&6\$:6*\$&P89. &0 1>, &9.\$87&A J, &"4?&%9"=(&&0%\$%\$% # \$49&:=&9.\$%\$&K"7D84I&
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?8=\$7\$49&6"798\$%&84K: *K\$?, &;C9&8%&:=9\$4&\$%\$498"*&9: &?*\$K\$: 684I&\$=\$+98K\$&6"*4%&:=:7&7\$. ";8*89"98:4&"4?&:9.\$7&
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Table 14: Rasch indicators for M2PI completed by each of 3 rater groups and composite indices.		
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Table 15: Pearson correlations among measures for MPAI Full Scale and M2PI composite and independent ratings

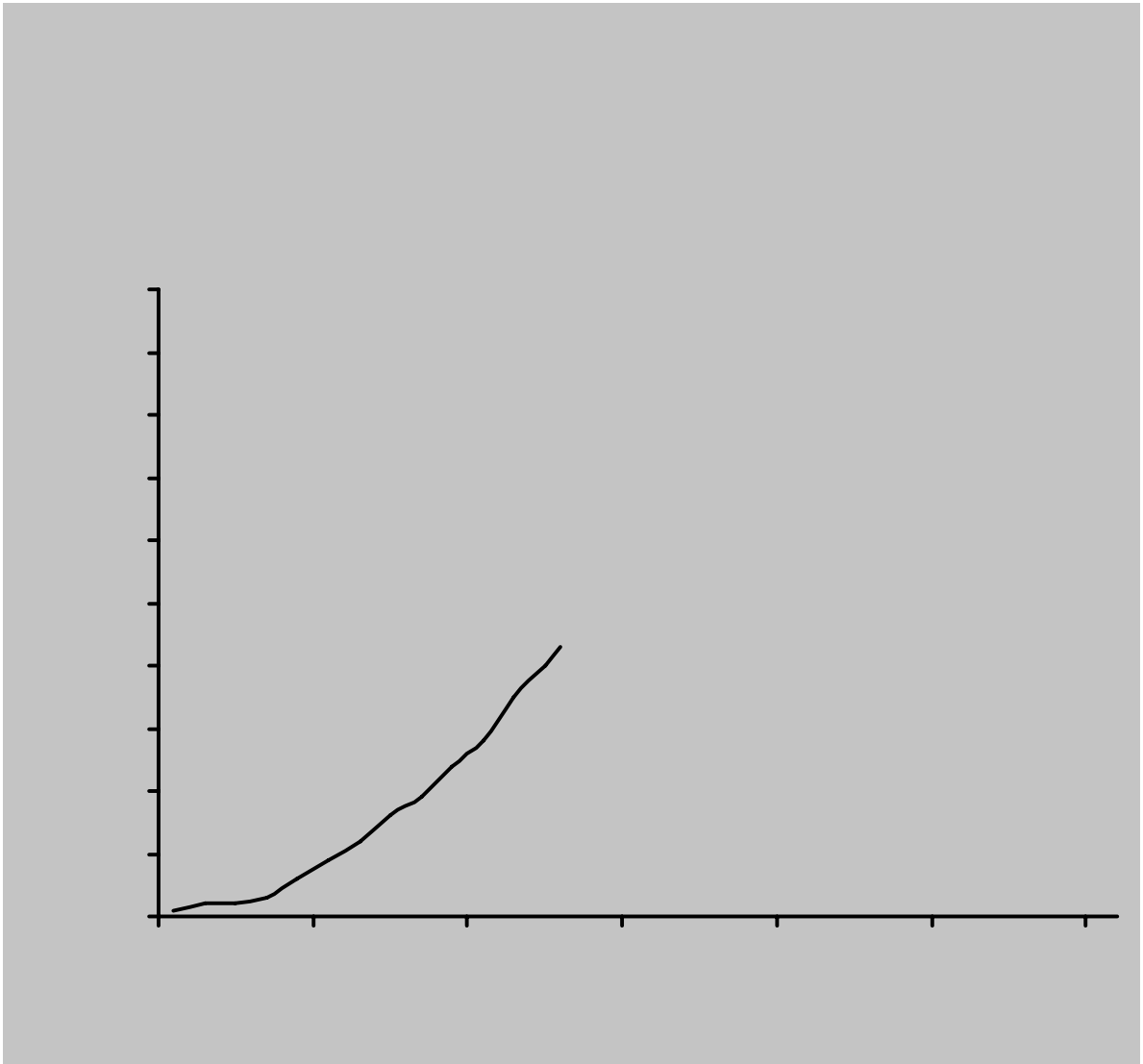
) M->+: #6*\$9\$?k;DLkk					
	'C**kA+**\$k [Md289\$#\k 025"9\$7k 3:#6:%89\$ >4?Yk	-\$:6*\$k P89.k 01>,k AJ,k %9"==kk	-\$:6*\$k P89.k 01>k "4?k %9"==kk	-\$:6*\$k P89.k 01>k "4?kAJ k %9"==kk	AJk"4?kk %9"==kk	-\$:6*\$k P89.k 01>k	AJk
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7"9\$7k+:#6:%89\$([S:k6*"+\$k'8IC7\$kMk:4k9.\$k%)"#\$k#\$978+k""%k'8IC7\$k^,k9:9"*k%+:7\$%k=:7k6"87\$?k7"984I%kP\$7\$
?8K8?k?k84k."*=(kkS.\$k#\$"%C7\$kk+:#;8484I7"984I%k#"?\$k;Dk%9"==kP89.k9.:%\$k#"?\$k;Dk6\$:6*\$kP89.k01>k

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Phys Med Rehabil.

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Medicine & Rehabilitation. MNN^gQM[O\L0bc20c](&
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APPENDICES

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Raw Score to T Score Conversion Tables

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%+:7\$%&[) \$"4&q&aNg&A / &q&^N\&;D&C%84I&S";*\$%&84&066\$4?8+\$%&^2>X(&&T-score&+:4K\$7%8:4&8%&7\$+: # # \$4?S?&
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67:K8?\$&4:7# "98K\$&?"9"&84&9. \$&+*"%&8+&%\$4%\$&:=&+: #6"78%:4&9:&"&h4:7# "*"i&[8(\$,&C484ZC7\$?\&7\$=\$7\$4+\$&I7:C6(&&
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APPENDIX I: NATIONAL SAMPLE STAFF RATINGS

**Table I-A: Conversion of raw scores to T scores (Mean = 50; SD = 10) for
Staff MPAI-4 Total Score (National sample)**

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APPENDIX I: N

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APPENDIX I: NATIONAL SAMPLE STAFF RATINGS

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Table I-D: Conversion of raw scores to T scores (Mean = 50; SD = 10) for

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APPENDIX II: M

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APPENDIX III: MAYO SAMPLE RATINGS BY PEOPLE WITH ABI

**Table III-A: Conversion of raw scores to T scores (Mean = 50; SD = 10) for
Self MPAI-4 Total Score (Mayo sample)**

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APPENDIX

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APPENDIX IV: MAYO SAMPLE SO RATINGS&

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