Supplementary Material for the article:

"The Physicians' Competence in Substance Abuse Test (P-CSAT): A Multidimensional Educational Measurement Tool for Substance Abuse Training Programs"

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This material supplements but does not replace the content of the peer-reviewed paper published in *Drug and Alcohol Dependence*

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The Physicians' Competence in Substance Abuse Test (P-CSAT)

Knowledge, Attitudes, and Self-reported Behaviors (KAB) Subscale with Item Type and Scoring

Item Type*	Item #	Item	Strongly Agree	Agree	Somewhat Agree	Somewhat Disagree	Disagree	Strongly Disagree
I	1	Women who drink more than 3 standard drinks in a day are at increased risk for alcohol-related problems.	1	2	3	4	5	6
	1	Scoring	5	4	3	2	1	0
S	2	I can use a medical interview to detect problem drinking.	1	2	3	4	5	6
	2	Scoring	5	4	3	2	1	0
S	3	Some patients do not consider beer to be an alcoholic beverage.	1	2	3	4	5	6
	3	Scoring	5	4	3	2	1	0
I	4	Patients who smoke are at increased risk for drinking heavily.	1	2	3	4	5	6
	4	Scoring	5	4	3	2	1	0
S	5	Most patients object to being screened for alcohol use by their doctor.	1	2	3	4	5	6
	5	Scoring	0	1	2	3	4	5
S	6	Quantity-frequency questions and instruments such as the AUDIT-C are effective in identifying at-risk or problem drinking.	1	2	3	4	5	6
	6	Scoring	5	4	3	2	1	0
I	7	Nearly three-fourths of US adults exceed low risk drinking limits.	1	2	3	4	5	6
	7	Scoring	0	1	2	3	4	5
М	8	There is good evidence that primary care physicians can use brief interventions to decrease alcohol use in patients who drink above the recommended limits.	1	2	3	4	5	6
	8	Scoring	5	4	3	2	1	0

M	9	The use of brief interventions for alcoholdependent patients at monthly intervals for 1-2 years can lead to reductions, but never leads to complete abstinence from drinking.	1	2	3	4	5	6
	9	Scoring	0	1	2	3	4	5
R	10	If a patient fails to respond to acamprosate to achieve abstinence from alcohol, naltrexone will show no benefit and should not be used.	1	2	3	4	5	6
	10	Scoring	0	1	2	3	4	5
M	11	When counseling a patient, I should not share my concern that his/her drinking is more than is medically safe.	1	2	3	4	5	6
	11	Scoring	0	1	2	3	4	5
M	12	Ambivalence regarding cutting back on drinking is rare, and an indication of a severe problem.	1	2	3	4	5	6
	12	Scoring	0	1	2	3	4	5
M	13	If a patient is not willing to consider changing their drinking habits at the first visit, he/she is not likely to cut back on drinking.	1	2	3	4	5	6
	13	Scoring	0	1	2	3	4	5
M	14	An important step in alcohol counseling is negotiating a drinking goal with the patient.	1	2	3	4	5	6
	14	Scoring	5	4	3	2	1	0
M	15	Liver function should be evaluated prior to the use of acamprosate because this drug is contraindicated in persons with liver impairment.	1	2	3	4	5	6
	15	Scoring	0	1	2	3	4	5
R	16	If a patient has failed to cut back on drinking after several brief intervention sessions, he/she is not an appropriate candidate for a medication trial.	1	2	3	4	5	6
	16	Scoring	0	1	2	3	4	5
M	17	Disulfiram is the preferred treatment if a	1	2	3	4	5	6

		patient wants to continue drinking, but at reduced levels.						
	17	Scoring	0	1	2	3	4	5
R	18	On follow up, your patient reports that he was not able to achieve his goal of abstaining from alcohol. The most appropriate intervention is to postpone further efforts and try again in 3-6 months.	1	2	3	4	5	6
	18	Scoring	0	1	2	3	4	5
S	19	In the U.S. Prescription pain medication abuse is more than twice as common as heroin and cocaine abuse combined.	1	2	3	4	5	6
	19	Scoring	5	4	3	2	1	0
M	20	A70 year old patient has been taking temazepam nightly for the past 6 years. The best course of action is to continue to prescribe it for her.	1	2	3	4	5	6
	20	Scoring	0	1	2	3	4	5
M	21	Chronic opioid analgesic therapy in a middle-aged patient without a past history of addiction is associated with a high risk of opioid addiction.	1	2	3	4	5	6
	21	Scoring	0	1	2	3	4	5
M	22	The risk of addiction with short-term use of prescription pain medications is comparable to the risk of addiction with chronic use.	1	2	3	4	5	6
	22	Scoring	0	1	2	3	4	5
M	23	Most chronic pain patients will adhere to the goals of a formal opioid agreement.	1	2	3	4	5	6
	23	Scoring	5	4	3	2	1	0
М	24	One of my goals in managing substance abuse is to teach patients how to handle drug cravings.	1	2	3	4	5	6
	24	Scoring	5	4	3	2	1	0
R	25	A local pharmacist contacts you because one of your patients has also been receiving	1	2	3	4	5	6

		prescriptions for hydrocodone from two other doctors. The most appropriate management is to tell the pharmacist to cancel the prescription and to discharge the patient from your practice.						
	25	Scoring	0	1	2	3	4	5
S	26	In the US, cocaine is the most commonly used illicit drug.	1	2	3	4	5	6
	26	Scoring	0	1	2	3	4	5
I	27	Marijuana use has not been connected to work-related issues such as tardiness, absences, or job turnover.	1	2	3	4	5	6
	27	Scoring	0	1	2	3	4	5
М	28	A 20 year old college student is concerned about the effects of marijuana on her memory; however, she doesn't feel confident that she will be able to change her behavior. She should be referred to an inpatient substance abuse rehabilitation program due to the severity of her symptoms.	1	2	3	4	5	6
	28	Scoring	0	1	2	3	4	5
M	29	A 34 year old patient is not ready to stop smoking marijuana. The most appropriate next step, using the motivational interviewing technique, is to forcefully confront him with the likely health consequences of continued marijuana use.	1	2	3	4	5	6
	29	Scoring	0	1	2	3	4	5
M	30	Methamphetamine cravings can be treated in an office setting with buprenorphine.	1	2	3	4	5	6
	30	Scoring	0	1	2	3	4	5

^{*}Item Type: S = screening for substance use disorders, I = interpreting screening results, M = managing common substance use disorders in the outpatient setting, R = re-evaluating responses to treatment.

Script Concordance Test (SCT) Subscale with Item Type and Scoring

1. A 50 year-old married female and mother of two complains of daytime fatigue and problems sleeping.

If you were considering:	And you find:	This intervention becomes:						
Drogarihina zalnidam	She drinks four glasses of wine per day	(-2 = contraindicated; +2 = necessary)						
Prescribing zolpidem	She drinks four glasses of while per day	-2	-1	0	+1	+2		
Type* = M	Scoring	5	1.07	0	0	0		

2. A 19 year-old college freshman who is failing multiple classes wants medication to help her concentrate. She admits to using occasional marijuana.

If you were considering:	And you find:	This cor	dition be	ecomes:			
Attention-deficit hyperactivity disorder	She was prescribed methylphenidate in		(-2 = rule	ed out; +2	= certain	ı)	
(ADHD)	high school	-2	-1	0	+1	+2	_
Type* = I	Scoring	0	0	1.67	5	0.42	Ī

3. A 19 year-old college freshman who is failing multiple classes wants medication to help her concentrate. She admits to using occasional marijuana.

If you were considering:	And you find:	This evaluation becomes:				
Ordering a urine drug	She was an A student in high school and	(-2 = contraindicated; +2 = necessary)				
screen	captain of her softball team	-2	-1	0	+1	+2
Type* = S	Scoring	0	0	0.91	1.82	5

4. A 45 year-old businessman is concerned about decreased libido and wishes to get a prescription for the erectile dysfunction medication he saw advertised on television.

If you were thinking of:	And you find:	This condition becomes:					
Excessive alcohol use	Testicular streethy		(-2 = rule	ed out; +2	= certain)		
	Testicular atrophy	-2	-1	0	+1	+2	
Type* = I	Scoring	0	0	2.27	5	0.45	

5. A 45 year-old businessman is concerned about decreased libido and wishes to get a prescription for the erectile dysfunction medication he saw advertised on television.

If you were thinking of:	And you find:	This intervention becomes:					
Duoganihina sildanafil	He consumes 2 montinis most avanines	(-2 = contraindicated; +2 = necessary)					
Prescribing sildenafil	He consumes 3 martinis most evenings	-2	-1	0	+1	+2	
Type* = M	Scoring	2.86	5	3.57	0.71	0	

6. A 39 year-old carpenter comes to urgent care with a broken arm from falling off a roof. He tells you he felt lightheaded before falling.

If you were thinking of:	And you find:	This condition becomes:						
Vantica	He has hilatoral conjugative linication	((-2 = rule)	d out; +2	= certain)			
Vertigo	He has bilateral conjunctival injection		-1	0	+1	+2		
Type* = I	Scoring	0.56	5	2.78	1.11	0		

7. A 29 year-old exotic dancer presents to your primary care clinic complaining of intermittent chest pain. Her total cholesterol level is 210 mg/dL.

If you were thinking of:	And you find:	This condition becomes:					
Coronary artery disease	Che has a nonformeted massal continue	(-2 = ruled out; +2 = certain)					
	She has a perforated nasal septum	-2	-1	0	+1	+2	

$Type^* = I$	Scoring	2.50	5	0.50	0.50	0
- J P	~ 6		_		0.00	_

8. A 29 year-old exotic dancer presents to your primary care clinic complaining of intermittent chest pain. Her total cholesterol level is 210 mg/dL.

If you were thinking of:	And you find:	This intervention becomes:					
Prescribing diet and exercise with routine follow-up.	She has a history of sexual trauma and	(-2 = contraindicated; +2 = necession)					
	suicide attempts	-2	-1	0	+1	+2	
Type* = M	Scoring	5	3.75	1.25	0.63	0	Ī

9. A 55 year-old school teacher, who is a long-time patient of yours, is bothered by the recent onset of falls and lightheadedness. She takes hydrocodone for chronic migraine headaches.

If you were thinking of:	And you find:	This condition becomes:					
Drug diversion	Her prescription for hydrocodone was	(-2 = ruled out; +2 = certain)					
	filled early	-2	-1	0	+1	+2	
Type* = R	Scoring	0	0.56	3.89	5	0	

10. A 55 year-old school teacher, who is a long-time patient of yours, is bothered by the recent onset of falls and lightheadedness. She takes hydrocodone for chronic migraine headaches.

If you were thinking of:	And you find:	This cond	dition becor	mes:			
Possible intrograpiel lesion	Her prescription for hydrocodone was		(-2 = ruled)	out; +2	= certain)		
Possible intracranial lesion	filled early	-2	-1	0	+1	+2	
Type* = R	Scoring	0	1.54	5	0	0	Ī

11. A 55 year-old school teacher, who is a long-time patient of yours, is bothered by the recent onset of falls and lightheadedness. She takes hydrocodone for chronic migraine headaches.

If you were considering:	And you find:	This evaluation becomes:					
Obtaining orthostatic vital signs	She has been taking a tricyclic	(-2 =	= necessa	ıry)			
	antidepressant prescribed by a psychiatrist	-2	-1	0	+1	+2	
Type* = R	Scoring	0.45	0	0.91	1.36	5	

12. A 44 year-old mailman wants help with his "nerves".

If you were thinking of:	And you find:	This condition becomes:					
Generalized Anxiety Disorder	He has elevated serum ALT and alkaline phosphatase levels on routine	(-2 = ruled out; +2 = certain)					
	testing						
Type* = I	Scoring	0	5	2.73	0	0	

13. A 44 year-old mailman wants help with his "nerves".

If you were thinking of:	And you find:	This condition becomes:					
Panic Disorder	He has responded to SSRI medication	(-2 = ruled out; +2 = certain)					
	in the past.	-2	-1	0	+1	+2	
Type* = I	Scoring	0	0	0.33	5	0.33	

14. A 44 year-old mailman wants help with his "nerves".

If you were considering:	And you find:	This intervention becomes:					
Motivational interviewing	He keeps a flask of whisky to sip during his mail route to calm his nerves	`	contraind	icated; +2	= necess	ary) +2	
	during me man route to earn me nerves	-2	-1	U	1 1	1 2	

$Type^* = M$	Scoring	0	0	0	1.07	5

15. A 44 year-old mailman wants help with his "nerves".

If you were considering:	And you find:	This inte	This intervention becomes: $(-2 = \text{contraindicated}; +2 = \text{necessary})$ $-2 \qquad -1 \qquad 0 \qquad +1 \qquad +2$ $5 \qquad 0.31 \qquad 0 \qquad 0 \qquad 0$				
Prescribing alprazolam	He was recently suspended from work	(-2 = contraindicated; +2 = necessary)					
	for a DUI while driving a mail truck	-2	-1	0	+1	+2	
$Type^* = M$	Scoring	5	0.31	0	0	0	

16. Mrs. Reynolds is a 76 year-old woman who lives by herself in a condo. She has osteoarthritis and history of depression, still drives, and goes to the grocery store and senior center at least twice a week. She takes ibuprofen, Tylenol #3, alprazolam and sertraline. Recently, she had a minor car accident driving home from church. Mrs. Reynolds sounded confused and disoriented to the police, so they called her daughter Jennifer, who took Mrs. Reynolds to your office.

If you were thinking of:	And you find:	This condition becomes:					
Alcohol abuse	Jennifer has never seen her drink	nk $(-2 = \text{ruled out}; +2 = \text{cert})$					
	alcohol	-2	-1	0	+1	+2	
Type* = I	Scoring	0	5	3.5	0	0	

17. Mrs. Reynolds is a 76-year-old woman who lives by herself in a condo. She has osteoarthritis and history of depression, still drives, and goes to the grocery store and senior center at least twice a week. She takes ibuprofen, Tylenol #3, Alprazolam and Sertraline. Recently, she had a minor car accident driving home from church. Mrs. Reynolds sounded confused and disoriented to the police, so they called her daughter Jennifer, who took Mrs. Reynolds to your office.

If you were thinking of:	And you find:	This condition becomes:					
Alcohol abuse	Her responses to the CAGE questions	(-2 = ruled out; +2 = certain)					
	are all negative	-2	-1	0	+1	+2	
Type* = I	Scoring	1	5	2.5	0	0	

18. Mrs. Reynolds is a 76-year-old woman who lives by herself in a condo. She has osteoarthritis and history of depression, still drives, and goes to the grocery store and senior center at least twice a week. She takes ibuprofen, Tylenol #3, Alprazolam and Sertraline. Recently, she had a minor car accident driving home from church. Mrs. Reynolds sounded confused and disoriented to the police, so they called her daughter Jennifer, who took Mrs. Reynolds to your office.

If you were thinking of:And you find:This condition becomes:Sedative Hypnotic abuseHer anxiety has never been controlled(-2 = ruled out; +2 = certain)Type* = RScoring003.3351.11

19. Mrs. Reynolds is a 76-year-old woman who lives by herself in a condo. She has osteoarthritis and history of depression, still drives, and goes to the grocery store and senior center at least twice a week. She takes ibuprofen, Tylenol #3, Alprazolam and Sertraline. Recently, she had a minor car accident driving home from church. Mrs. Reynolds sounded confused and disoriented to the police, so they called her daughter Jennifer, who took Mrs. Reynolds to your office. Mrs. Reynolds admits to drinking alcohol.

If you were considering:	And you find:	This intervention becomes:					
Firmly telling Mrs. Reynolds that she should	hat she should Mrs. Reynolds is very angry that						
not be drinking while you are prescribing these medications	Jennifer is concerned about her drinking	-2	-1	0	+1	+2	
$Type^* = M$	Scoring	0.38	0	0	1.15	5	

20. A 30 year-old woman comes to your office for a yearly physical. She complains of trouble sleeping. She lost her job 6 months ago and her husband recently filed for divorce. She has trouble paying rent and lost her car because of lack of payment.

If you were thinking of: And you find: This condition becomes: Attention Deficit Disorder Her problems started about a year ago (-2 = ruled out; +2 = certain)

		-2	-1	0	+1	+2
Type* = I	Scoring	5	3.33	0.56	0.56	0

21. A 30 year-old woman comes to your office for a yearly physical. She complains of trouble sleeping. She lost her job 6 months ago and her husband recently filed for divorce. She has trouble paying rent and lost her car because of lack of payment.

If you were thinking of:	And you find:	This condition becomes:					
Depression	She doesn't like spending time with	(-2 = ruled out; +2 = certain)					
	her friends anymore	-2	-1	0	+1	+2	
Type* = I	Scoring	0	0	0	5	1.54	

22. A 30 year-old woman comes to your office for a yearly physical. She complains of trouble sleeping. She lost her job 6 months ago and her husband recently filed for divorce. She has trouble paying rent and lost her car because of lack of payment.

If you were considering:	And you find:	This evaluation becomes:						
Screening with the ASSIST	Her father died of alcoholic cirrhosis	(-2 = contraindicated; +2 = necessary)						
Screening with the ASSIST	Her famer died of alcoholic cirrilosis	-2	-1	0	+1	+2		
Type* = S	Scoring	0	0	0	2.73	5		

23. A 30 year-old woman comes to your office for a yearly physical. She complains of trouble sleeping. She lost her job 6 months ago and her husband recently filed for divorce. She has trouble paying rent and lost her car because of lack of payment.

This condition becomes

ii you were unliking or.	Ana you ma.	This condition becomes.					
Danrassian	She likes to porty with her friends	(-2 = ruled out; +2 = certain)					
Depression	She likes to party with her friends	-2	-1	0	+1	+2	
Type* = I	Scoring	0	5	2.5	0.5	0.5	

If you were thinking of

And you find.

24. A 30 year-old woman comes to your office for a yearly physical exam. She complains of trouble sleeping. She lost her job 6 months ago and her husband recently filed for divorce. She has trouble paying rent and lost her license because of a D.U.I. conviction.

If you were considering:	And you find:	This intervention becomes:				
Asking her on a scale of 1	She sobs while describing the many	(-2 =	contraindic	eated; +2	= necessar	ry)
to 10 how ready she is to stop drinking.	problems drinking has caused	-2	-1	0	+1	+2
Type* = M	Scoring	0.42	0.42	0	1.25	5

25. Mr. Roberts is a 40 year-old accountant who told you that he is under a tremendous amount of pressure during this tax season and cannot seem to relax. On examination, his blood pressure is 175/98 and his pulse is 90.

If you were thinking of:	And you find:	This condition becomes:					
Essential Hypertension	His GGT is 120 (N 20-40) and his	(-2 = ruled out; $+2$ = certain)					
	MCV is 105 (N 80-95)	-2	-1	0	+1	+2	
Type* = R	Scoring	0.38	5	1.15	0	0	

26. Mr. Roberts is a 40 year-old accountant who told you that he drinks at least 20 standard drinks per week. On examination, his blood pressure is 175/98. On laboratory tests, his GGT is 120 (N 20-40) and his MCV is 105 (N 80-95).

If you were considering:	And you find:	This intervention becomes:						
Instructing Mr. Roberts that he needs to cut down	n He doesn't view drinking as a problem	(-2 = contraindicated; +2 = necessary)						
on his drinking.		-2	-1	0	+1	+2		
$Type^* = M$	Scoring	0	0	0	1.07	5		

27. Ms. Garfield is a 19 year-old college student who presents to your clinic complaining of problems concentrating and is very concerned because she is failing the majority of her courses.

If you were considering:	And you find:	This evaluation becomes:							
Obtaining a urine drug	She has been depressed	(-2 =	(-2 = contraindicated; +2 = necessary)						
screen	She has been depressed	-2	-1	0	+1	+2			
Type* = S	Scoring	0.56	0	1.11	5	2.78			

28. Ms. Garfield is a 19 year-old college student who presents to your clinic complaining of problems concentrating and is very concerned because she is failing the majority of her courses.

If you were thinking of:	And you find:	This condition becomes:					
A mariatar dia andan	She has difficulty taking her tests		(-2 = ruled)	out; +2 =	certain)		
Anxiety disorder	because she is afraid of what other people are thinking about her	-2	-1	0	+1	+2	
Type* = I	Scoring	0	.91	1.36	5	0.45	

29. Ms. Garfield is a 19 year-old college student patient of yours who is at risk for failing out of school. On a random urine drug screen, you find that she has cannabinoids in her system.

If you were considering:	And you find:	This intervention becomes:							
Asking if you could educate her on how			(-2 = contraindicated; +2 = necessary)						
smoking marijuana could interfere with learning.	drugs.	-2	-1	0	+1	+2			
Type* = M	Scoring	0	.38	0	1.15	5			

30. Ms. Garfield is a 21 year-old college student whom you treat for ADHD. She has agreed to stop smoking marijuana as part of her treatment agreement and submit to random urine drug testing. Two months ago a urine drug screen was negative. Today a urine drug screen is positive for cannabinoids. She is adamant that she has not smoked.

If you were considering: And you find:

This intervention becomes:

Sending the urine screen out for GC/MS*	She breaks into tears, sobbing that	(-2 = contraindicated; +2 = necessary)						
confirmation *gas chromatography/mass spectroscopy	nobody trusts her	-2	-1	0	+1	+2		
$Type^* = M$	Scoring	0	0.42	1.25	0.42	5		

31. Mrs. Harrison is a 52 year-old woman who presents to your clinic requesting pain medication for a slipped disk at L4-L5. You review an MRI report that she brought with her that is 12 months old. You perform a complete physical and find some complaints of tenderness in the lumbar region.

If you were considering:	And you find:	This evaluation becomes:				
Asking if she has ever had a problem with pain medication	She refuses to sign a consent form to speak with past health care providers stating that she wants you to have an unbiased opinion	(-2 = -2	contraince	licated; +2	= necessa +1	+2
Type* = M	Scoring	0	0	0.33	0.33	5

32. Mr. Grant is a 27 year-old gentleman you are seeing for the first time. He presents to you as a follow-up from an emergency room visit for a motor vehicle accident 6 days prior. He has multiple facial abrasions and a bandaged forearm. He is unaware that you have been faxed the ED report noting a blood alcohol level above the legal limit.

If you were considering:	And you find:	This intervention becomes:					
Presenting him with the	He is adamant that he does not drink	(-2 = contraindicated; +2 = necessary)					
data on the ED report		-2	-1	0	+1	+2	
Type* = M	Scoring	0	0	0	0.67	5	

33. Mr. Grant is a 27 year-old gentleman you are seeing for the first time. He presents to you as a follow-up from an emergency room visit for a motor vehicle accident 6 days prior. He has multiple facial abrasions and a bandaged forearm. He is unaware that you have been faxed the ED report noting a blood alcohol level above the legal limit.

If you were considering:	And you find:	This intervention becomes:
Discussing health problems	He scored a 25 on the alcohol specific	(-2 = contraindicated: +2 = necessary)

Discussing hearth problems	The scored a 25 on the alcohol specific	(2-contramateuted, +2-necessary)				
associated with drinking	section of the ASSIST	-2	-1	0	+1	+2
Type* = M	Scoring	0	0	0	1.07	5

^{*}Item Type: S = screening for substance use disorders, I = interpreting screening results, M = managing common substance use disorders in the outpatient setting, R = re-evaluating responses to treatment.

Administration and Scoring

The P-CSAT can be administered as a single survey or the two subscales (KAB and SCT) can be administered separately. The shaded areas are not used when the test is administered. During administration of the SCT, students should be advised that each item is separate and does not relate to any previous items. To reduce confusion, items with similar stems can be randomly re-ordered.

Total scores are the sums of scores associated with each choice. The maximum score is 150 for KAB items and 165 for SCT items.

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