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Supplementary Table 1. Adverse Events^a

Adverse Event, n	Integrated Stepped Alcohol Treatment	Treatment as Usual
Medically-Related		
Cardiovascular (chest pain, congestive heart failure, hypertension)	1	5
Headaches	1	0
Gastrointestinal symptoms	1	3
End-stage renal disease	0	1
Infection	0	1
Surgically-Related		
Appendectomy	0	1
Psychiatrically-Related		
Suicidality	1	1
Substance-Related	3	0
Trauma or injury (car accident, fracture)	1	2
Death	2	0

a. Only headaches were considered possibly study related; no other events were considered possibly or likely study related.

Supplementary Table 2. Drinking and HIV-related outcomes by treatment group

Outcome	Integrated Stepped Alcohol Treatment, n=63	Treatment as Usual, n=65	Adjusted Treatment Effect (95% CI) ISAT vs. TAU ^{a,b}	P value ^a
Drinks per week, Lsmean (SD)				
Baseline	31.3 (23.5)	32.8 (27.3)	NA	
Week 24	10.4 (16.5)	15.6 (17.6)	-4.24 (-9.39, 0.91)	0.11
Week 52	7.8(14.3)	15.9(18.9)	-6.86(-15.02,1.28)	0.10
No heavy drinking days, n (%)^c				
Baseline	4/61 (6.56)	7/64 (10.94)	N/A	
Week 24	26/49 (53.06)	19/49 (38.78)	2.21 (0.80, 6.10)	0.13
Week 52	25/36 (69.44)	14/39 (35.90)	4.90 (1.51, 15.84)	0.008
Drinks per drinking day, Lsmean (SD)				
Baseline	7.2(4.9)	8.6 (9.6)	N/A	
Week 24	4.9 (3.6)	5.4 (3.3)	-0.44 (-1.92, 1.04)	0.56
Week 52	4.1 (3.0)	6.3 (3.5)	-2.22 (-3.79, -0.66)	0.005
Percentage of days abstinent, Lsmean (SD)				
Baseline	35 (29)	33 (30)	N/A	
Week 24	70 (30)	59 (32)	8% (-0.4%, 17%)	0.06
Week 52	77 (29)	60(39)	15% (1%, 30%)	0.03
PEth, Lsmean (SD)^d				
Baseline	144.5 (160.4)	182.0 (222.9)	NA	
Week 24	142.7 (177.6)	241.5 (323.5)	-43.29 (-170.62, 84.05)	0.50
VACS Index, Lsmean (SD)^e				
Baseline	28.9 (16.2)	28.2 (21.3)	NA	
Week 24	26.5 (14.5)	29.9 (20.3)	-1.84 (-5.25, 1.57)	0.28
Week 52	27.9 (16.1)	27.4 (20.3)	0.83 (-5.84, 4.16)	0.74
Undetectable HIV viral load, n (%)^f				
Baseline	42/63 (66.7)	41/65 (63.1)	NA	
Week 24	30/38 (78.9)	24/36 (66.7)	1.99 (0.55, 7.24)	0.98
Week 52	27/30 (90.0)	23/35 (65.7)	5.58 (1.11, 27.99)	0.04

a. Estimates based on results from linear mixed effects models for continuous outcomes and generalized linear mixed effects models for binary outcomes. For binary variables, treatment effects are expressed as an adjusted odds ratio.

b. Values adjusted for baseline assessment, site, baseline VACS Index

c. No heavy drinking defined as the absence of any heavy drinking days in the past 30 days, where heavy drinking days is defined for men ≥ 5 drinks per day and for women as ≥ 4 drinks per day.

d. PEth = phosphatidylethanol, an alcohol biomarker reflecting alcohol use over the past 21 days and higher scores are associated with higher levels of alcohol use.⁴¹

e. VACS Index is a validated measure of morbidity and mortality based on age, HIV biomarkers (CD4 cell count, HIV viral load), hemoglobin, FIB-4 score (a measure of liver fibrosis calculated based on aspartate and alanine aminotransferase and platelet count), creatinine and hepatitis C status. Scores range from 0 to 164; each 5 point increase is associated with a 20% increase in 5 year mortality risk.^{7,57}

f. Undetectable HIV viral load was based on the limit of detection and defined as <50 copies per mL

Supplementary Table 3. Past 6 month treatment services, emergency department visits and hospitalizations at baseline and follow-up by treatment group

Medication	Integrated Stepped Alcohol Treatment, N=63	Treatment as Usual, N=65	p value
Any inpatient alcohol treatment, n (%) ^a			
Baseline	1 (1.59)	1 (1.54)	
Week 24	0 (0.00)	3 (4.62)	0.24
Week 52	1 (1.59)	3 (4.62)	0.62
Any outpatient alcohol treatment, n (%) ^a			
Baseline	1 (1.59)	1 (1.54)	
Week 24	37 (58.73)	26 (40.00)	0.03
Week 52	19 (30.16)	24 (36.92)	0.42
Emergency Department Visits, n (%) ^b			
Baseline	17 (26.98)	20 (30.77)	
Week 24	19 (30.16)	22 (33.85)	0.65
Week 52	20 (31.75)	16 (24.62)	0.37
Hospitalization, n (%) ^b			
Baseline	9 (14.29)	9 (13.85)	
Week 24	5 (7.94)	12 (18.46)	0.08
Week 52	12 (19.05)	6 (9.23)	0.11

- a. Assessed using electronic medical record data and based on presence of an alcohol or drug related ICD-9 or ICD-10 code at any time and, for outpatient services, if they had a SUD clinic stop code or CPT code; for inpatient services, included if they had a SUD bed section stop code or ICD-9 or ICD-10 procedure code.¹
- b. Assessed using electronic medical record data.