

**E-Table 1.** Questionnaire<sup>a</sup> performance in identifying illicit drug use, alcohol use, or opioids for New Haven and Detroit sites, excluding Boston

	N (%) positive for use	AUC <sup>c</sup> (95% CI)	Sensitivity <sup>d</sup> (95% CI)	Specificity <sup>d</sup> (95% CI)	Accuracy <sup>d</sup> (95% CI)	PPV (95% CI)	NPV (95% CI)
<b>Illicit Drugs 187 (21.1)</b>							
SURP-P	290 (33.0)	0.60 <sup>x,y</sup> (0.56, 0.64)	0.49 (0.42, 0.56)	0.71 <sup>x</sup> (0.68, 0.75)	0.67 <sup>x</sup> (0.63, 0.70)	0.31 (0.26, 0.36)	0.84 (0.81, 0.87)
WIDUS	317 (36.2)	<b>0.66<sup>z</sup> (0.62, 0.70)</b>	0.62 (0.55, 0.69)	0.71 <sup>x</sup> (0.67, 0.74)	0.69 <sup>x</sup> (0.66, 0.72)	0.36 (0.31, 0.42)	0.87 (0.85, 0.90)
CRAFFT	172 (19.5)	0.58 <sup>x</sup> (0.55, 0.62)	0.32 <sup>x</sup> (0.26, 0.39)	0.84 (0.81, 0.87)	0.73 (0.70, 0.76)	0.35 (0.28, 0.42)	0.82 (0.80, 0.85)
5P's	552 (62.4)	0.60 <sup>x,y</sup> (0.57, 0.64)	<b>0.79 (0.73, 0.85)</b>	0.42 (0.38, 0.46)	0.50 (0.46, 0.53)	0.26 (0.23, 0.30)	<b>0.88 (0.85, 0.92)</b>
NIDA <sup>b</sup>	59 (27.8)	0.63 <sup>y,z</sup> (0.60, 0.67)	0.28 <sup>x</sup> (0.21, 0.34)	<b>0.99 (0.98, 1.00)</b>	<b>0.84 (0.82, 0.86)</b>	<b>0.85 (0.76, 0.94)</b>	0.84 (0.81, 0.86)
<b>Alcohol Use 101 (11.4)</b>							
SURP-P	290 (33.0)	0.66 <sup>x</sup> (0.60, 0.71)	0.60 <sup>x</sup> (0.51, 0.70)	0.71 (0.67, 0.74)	0.69 (0.66, 0.72)	0.21 (0.16, 0.26)	0.93 (0.91, 0.95)
WIDUS	317 (36.2)	0.56 <sup>y</sup> (0.50, 0.61)	0.46 <sup>y</sup> (0.36, 0.56)	0.65 (0.62, 0.68)	0.63 (0.60, 0.66)	0.15 (0.11, 0.18)	0.90 (0.88, 0.93)
CRAFFT	172 (19.5)	<b>0.68<sup>x</sup> (0.63, 0.73)</b>	0.51 <sup>x,y</sup> (0.41, 0.61)	0.85 (0.82, 0.87)	0.81 (0.78, 0.83)	0.30 (0.23, 0.36)	0.93 (0.91, 0.95)
5P's	552 (62.4)	0.63 <sup>x</sup> (0.59, 0.67)	<b>0.85 (0.78, 0.92)</b>	0.40 (0.37, 0.44)	0.45 (0.42, 0.49)	0.15 (0.12, 0.18)	<b>0.95 (0.93, 0.98)</b>
NIDA <sup>b</sup>	25 (2.9)	0.56 <sup>y</sup> (0.52, 0.59)	0.13 (0.06, 0.20)	<b>0.98 (0.98, 0.99)</b>	<b>0.89 (0.87, 0.91)</b>	<b>0.52 (0.32, 0.72)</b>	0.90 (0.88, 0.92)
<b>Opioids 34 (3.8)</b>							
SURP-P	290 (33.0)	0.53 <sup>x</sup> (0.44, 0.61)	0.38 <sup>x</sup> (0.22, 0.55)	0.67 <sup>x</sup> (0.64, 0.70)	0.66 <sup>x</sup> (0.63, 0.69)	0.04 (0.02, 0.07)	0.96 (0.95, 0.98)
WIDUS	317 (36.2)	<b>0.67<sup>y</sup> (0.59, 0.75)</b>	0.69 <sup>y</sup> (0.53, 0.85)	0.65 <sup>x</sup> (0.62, 0.68)	0.65 <sup>x</sup> (0.62, 0.68)	0.07 (0.04, 0.10)	<b>0.98 (0.97, 0.99)</b>
CRAFFT	172 (19.5)	0.60 <sup>x,y</sup> (0.51, 0.68)	0.38 <sup>x</sup> (0.22, 0.55)	0.81 (0.79, 0.84)	0.80 (0.77, 0.82)	0.08 (0.04, 0.12)	0.97 (0.96, 0.98)
5P's	552 (62.4)	0.57 <sup>x,y</sup> (0.50, 0.65)	<b>0.76<sup>y</sup> (0.62, 0.91)</b>	0.38 (0.35, 0.41)	0.40 (0.36, 0.43)	0.05 (0.03, 0.06)	<b>0.98 (0.96, 0.99)</b>
NIDA <sup>b</sup>	21 (2.4)	0.59 <sup>x,y</sup> (0.53, 0.66)	0.21 <sup>x</sup> (0.07, 0.34)	<b>0.98 (0.97, 0.99)</b>	<b>0.95 (0.94, 0.97)</b>	<b>0.33 (0.13, 0.54)</b>	0.97 (0.96, 0.98)

Note. AUC=Area under the receiver operating characteristic curve; PPV=Positive Predictive Value; NPV=Negative Predictive Value; CI= Confidence Interval; Accuracy=proportion correct classifications. Values in bold represent the top score for that performance measure within each substance outcome (but are not necessarily significantly different from the other scores).

<sup>a</sup>All questionnaires were evaluated using their recommended published score for each separate outcome.

<sup>b</sup>The single drug use question was used for identifying illicit drug use; the single alcohol use question was used for identifying alcohol use, and the single question regarding prescription drug misuse was used for identifying any opioid use (whether prescription misuse or heroin).

<sup>c</sup>Post-hoc pairwise comparisons of questionnaires for substance use outcomes from z-score tests are shown with superscripts. Performance measures not statistically significantly different at  $p < .05$  share a letter; those that are statistically significantly different do not share a letter.

<sup>d</sup>Post-hoc pairwise comparisons of questionnaires for substance use outcomes from generalized estimating equation models, adjusted for race/ethnicity, site, trimester, and public assistance, are shown with superscripts. Performance measures not statistically significantly different at  $p < .05$  share a letter; those that are statistically significantly different do not share a letter.