

Supplementary Material:
Additional Statistical Measures

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CHI SQUARE ANALYSIS OF STUDY POPULATION

	A) Cases (N=103)		B) Non-cases (N=102)	
Demographic	χ^2	P-value	χ^2	P-value
Age group 6-11 vs. 12-18 yrs	2.13	0.14	0.37	0.55
Male vs. Female	1.99	0.16	2.54	0.11

Table S1: Chi square analysis for study population demographics. Age and gender proportions did not differ significantly for A) chart-reviewed cases or B) chart-reviewed non-cases as compared to all ED encounters with ICD-10 code for suicidality. $P < 0.05$ was considered significant.

CHART REVIEWER AGREEMENT

Sensitivity	Specificity	PPV	NPV	Label
0.957	0.915	0.909	0.96	*
0.895	0.935	0.895	0.935	action-past
0.917	0.895	0.733	0.971	action-present
1	0.812	0.919	1	ideation-past

0.966	1	1	0.955	ideation-present
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Table S2: Chart reviewer agreement by suicidality subtype. F1 is a measure of agreement between chart reviewers. PPV and NPV are positive and negative predictive values, respectively. Labels evaluated include suicidality action-past, action-present, ideation-present, and ideation-past. No comparison can be made to ICD-10 for ideation-past, because there is no corresponding ICD-10 code.

ICD-10 VALIDATION

Sensitivity	Specificity	PPV	NPV	Label
0.494	0.944	0.89	0.669	*
0.14	0.953	0.7	0.587	action-past
0.316	0.987	0.923	0.743	action-present
0.816	0.842	0.912	0.696	ideation-present

Table S3: ICD-10 evaluation compared to reviewer 1 (RX). ICD-10 agreement with reviewer 1 was highest for ideation-present (F1=86.1%) and lowest for action-past (F1=23.3%). ICD-10 codes were not present for more than half of all true positive suicidality actions in the evaluation. In the case of action-past, ICD-10 codes were missing for more than three quarters (sensitivity=14.0%) of true positive cases.

Sensitivity	Specificity	PPV	NPV	Label
0.573	0.961	0.848	0.855	*
0.267	0.955	0.615	0.828	action-past
0.357	0.982	0.833	0.86	action-present
0.831	0.939	0.907	0.885	ideation-present

Table S4: ICD-10 evaluation compared to reviewer 2 (AM). ICD-10 agreement with reviewer 2 was highest for ideation-present (F1=86.7%) and lowest for action-past (F1=37.2%). ICD-10 codes were not present for more than half of all true positive suicidality actions in the evaluation. In the case of action-past, ICD-10 codes were missing for nearly three quarters (sensitivity=26.7%) of true positive cases.