

Appendix 2. Equations for calculating diagnostic accuracy statistics

Outcome			
Test Result	Disease Present		
Test Result	Yes + repeats self-harm	No -did not repeat self-harm	Total
Positive (High-risk)	True positive (TP) [Sensitivity] Repeats self-harm & correctly identified as high-risk	False Positive (FP) Does not repeat self-harm & incorrectly identified as high-risk	All Patients positive on the test (TP + FP)
Negative (Low-risk)	False Negative (FN) Repeats self-harm & incorrectly identified as low risk	True Negative (TN) [Specificity] Does not repeat self-harm & correctly identified as low risk	All Patients negative on the test (FN + TN)
Total	Patients with disease (TP + FN)	Patients without disease (FP + TN)	All patients (TP+FP+FN+TN)

Calculations

Specificity (Spec)= $TN / (FP + TN)$

Negative likelihood ratio (LR-)= $\frac{FN}{(TP + FN)}$
 $\frac{TN}{(FP + TN)}$

Sensitivity (Sens)= $TP / (TP + FN)$

Positive Likelihood ratio (LR+)= $\frac{TP}{(TP + FN)}$
 $\frac{FP}{(FP + TN)}$

Positive Predictive value (PPV) = $TP / (TP + FP)$

Diagnostic Odds Ratio (DOR)= $\frac{\text{Sensitivity} \times \text{specificity}}{(1-\text{sensitivity}) \times (1-\text{specificity})}$

Number allowed to diagnose (NAD)= $1 / (1 - \text{Spec} - \text{Prev} (\text{Sens} - \text{Spec}))$

Prevalence (Prev)= $(TP + FN) / (TP + FP + FN + TN)$