

Appendix 4 (as supplied by the authors): Sensitivity analysis (SA), model performance evaluated at the top 5% cost threshold, by select risk score cut points, base scenario compared with three variants

Scenario	Risk Percentile		
	90th	95th	99th
Sensitivity^a			
Base (exclude non-users/part-period eligible in baseline; include deaths in prospective period)	0.464	0.311	0.098
SA 1 (as Base but including non-users)	0.390	0.234	0.064
SA 2 (as Base but excluding prospective year deaths)	0.434	0.282	0.088
Specificity^b			
Base (exclude non-users/part-period eligible in baseline; include deaths in prospective period)	0.919	0.964	0.995
SA 1 (as Base but including non-users)	0.932	0.970	0.996
SA 2 (as Base but excluding prospective year deaths)	0.918	0.962	0.994
Positive Predictive Value^c			
Base (exclude non-users/part-period eligible in baseline; include deaths in prospective period)	0.232	0.311	0.491
SA 1 (as Base but including non-users)	0.390	0.468	0.636
SA 2 (as Base but excluding prospective year deaths)	0.217	0.282	0.442
Accuracy^d			
Base (exclude non-users/part-period eligible in baseline; include deaths in prospective period)	0.896	0.931	0.950
SA 1 (as Base but including non-users)	0.878	0.897	0.903
SA 2 (as Base but excluding prospective year deaths)	0.893	0.928	0.949

Note: TP=true positives, TN=true negatives, FP=false positives, FN=false negatives

^a Sensitivity: Percentage high cost cases predicted correctly (TP/(TP+FN))

^b Specificity: Percentage of lower cost cases predicted correctly (TN/(TN+FP))

^c Positive predictive value: Percentage of predicted high cost cases that were high cost (TP/(TP+FP))

^d Accuracy: Percentage of all cases predicted correctly, high and lower cost ((TP+TN)/(TP+FP+TN+FN))