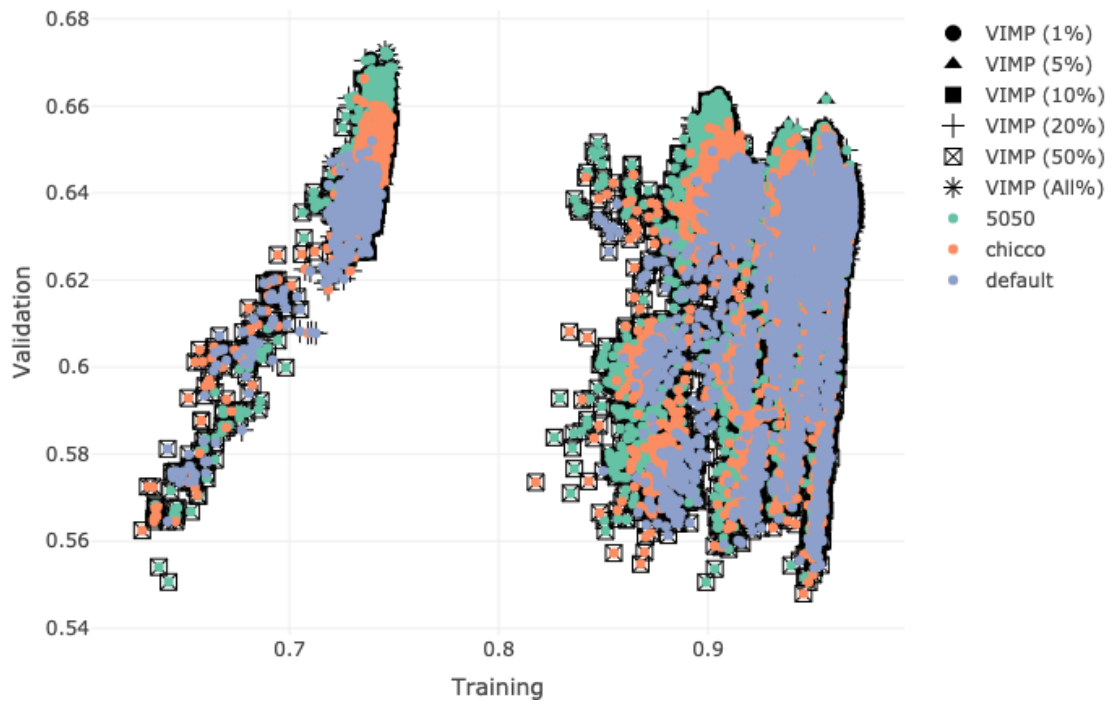


<i>Case</i> <i>n = 1,983</i> <i>(15.30%)</i>	<i>Control</i> <i>n = 10,988</i> <i>(84.70%)</i>	Original proportion
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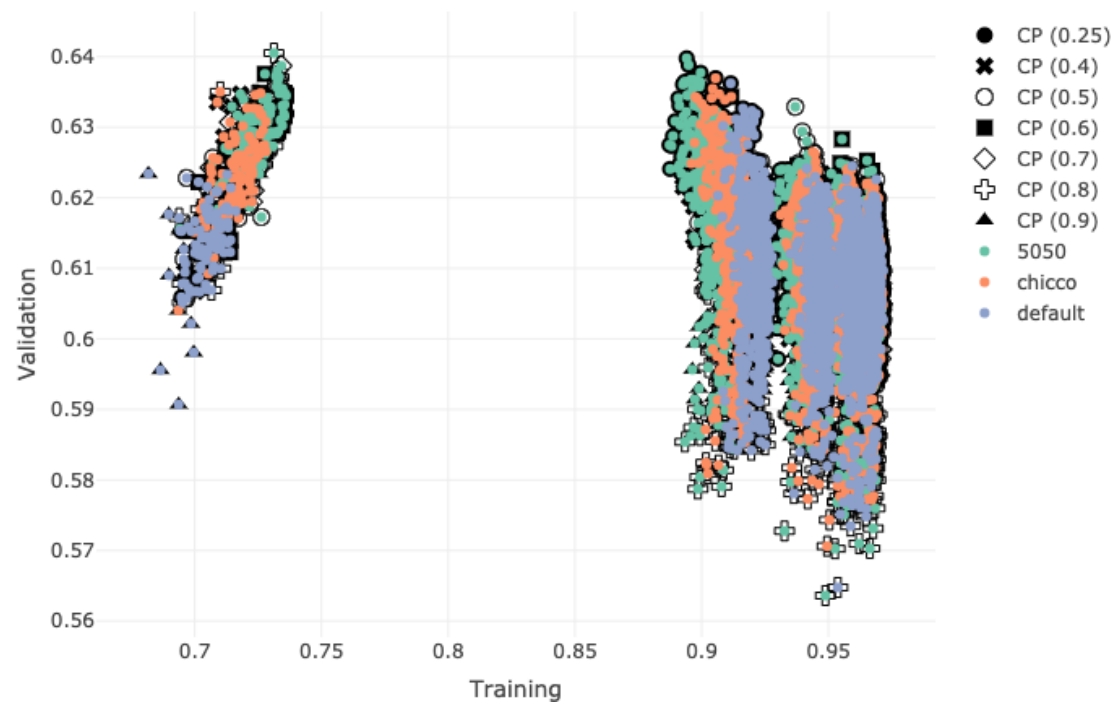
<i>Case</i> <i>n = 1,983</i> <i>(50.0%)</i>	<i>Control</i> <i>n = 1,983</i> <i>(50.0%)</i>	Same number of cases and controls proportion
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<i>Case</i> <i>n = 1,983</i> <i>(32.65%)</i>	<i>Control</i> <i>n = 4,091</i> <i>(67.35%)</i>	Chicco number of cases and controls proportion
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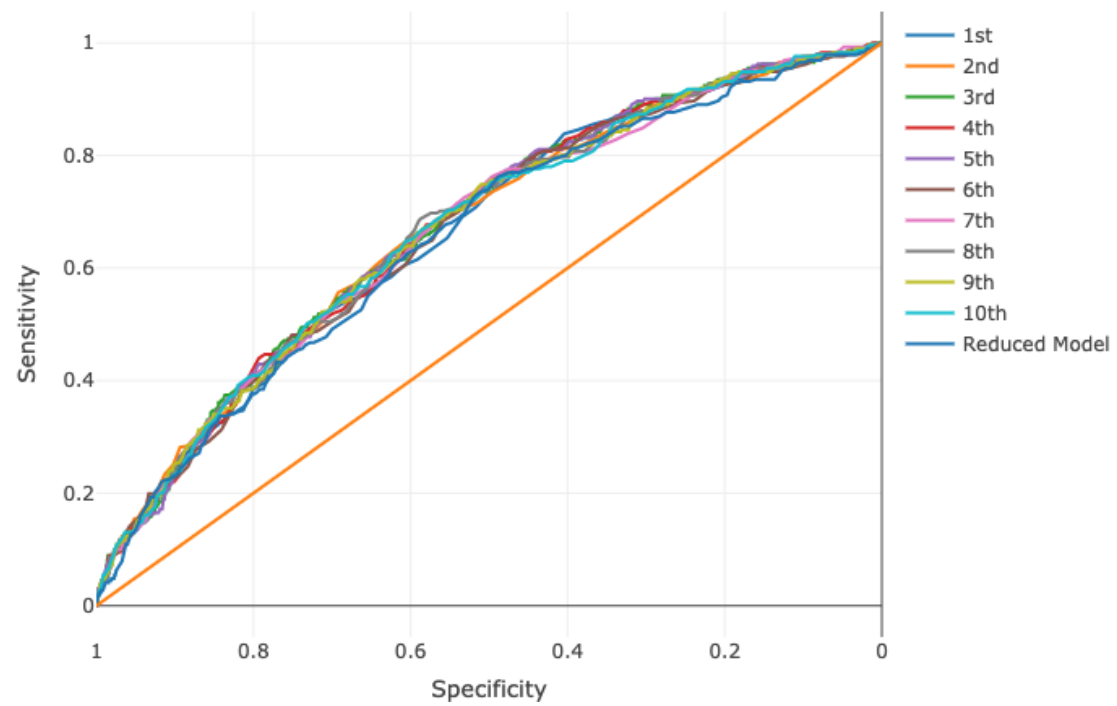
Supplementary Figure A.1: Bar chart representing the different relationship between the number of cases and controls included in the bootstrapped sample from the original training dataset used to develop each decision tree



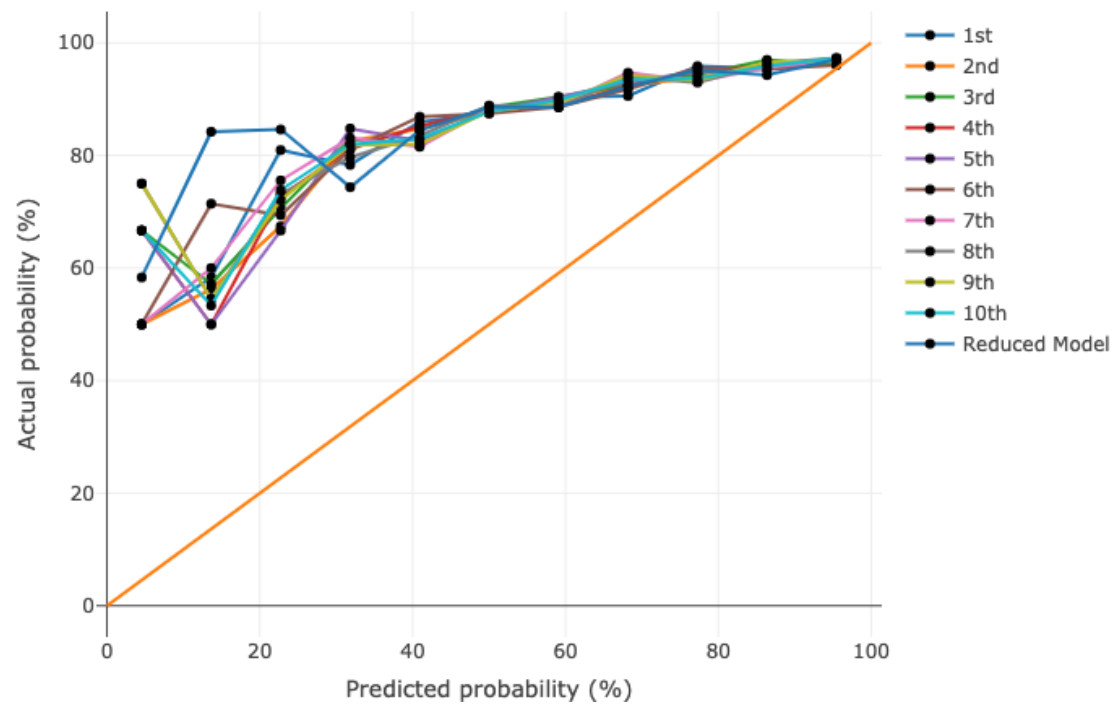
Supplementary Figure A.2: Scatter plot showing the Area Under the Receiver Operating Characteristic curve values in the training (x axis) and validation (y axis) datasets for all the developed models based on the tuning parameters without applying PCA



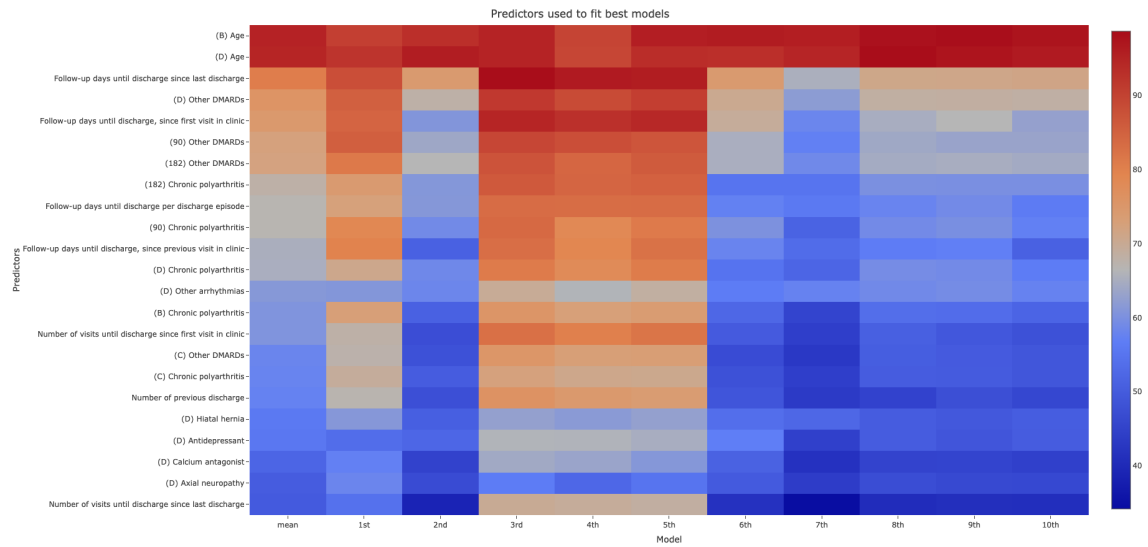
Supplementary Figure A.3: Scatter plot showing the Area Under the Receiver Operating Characteristic curve values in the training (x axis) and validation (y axis) datasets for all the developed models based on the tuning parameters applying PCA



Supplementary Figure A.4: Receiver operating characteristic curve (ROC) plot of the 10 selected outpatient readmission models based on the area under the ROC curve in the validation dataset, and of the reduced final model



Supplementary Figure A.5: Calibration curves of the 10 selected outpatient readmission models based on the area under the receiver operating characteristic curve in the validation dataset, and of the reduced final model



Supplementary Figure A.6: Heatmap showing the relative variable importance (VIMP) of the predictors included in the 10 selected outpatient readmission models based on the area under the receiver operating characteristic curve in the validation dataset. Only those predictors with a mean relative **VIMP** greater than a 50% were included