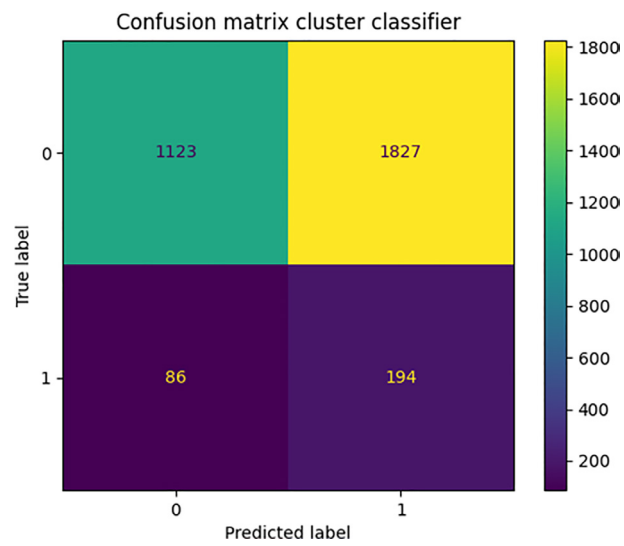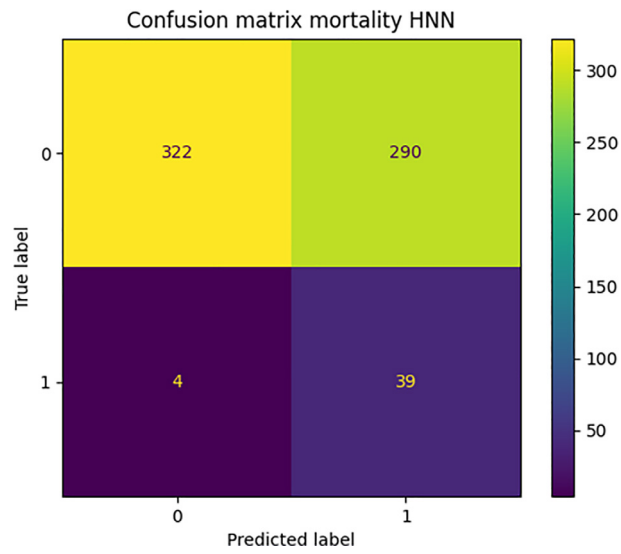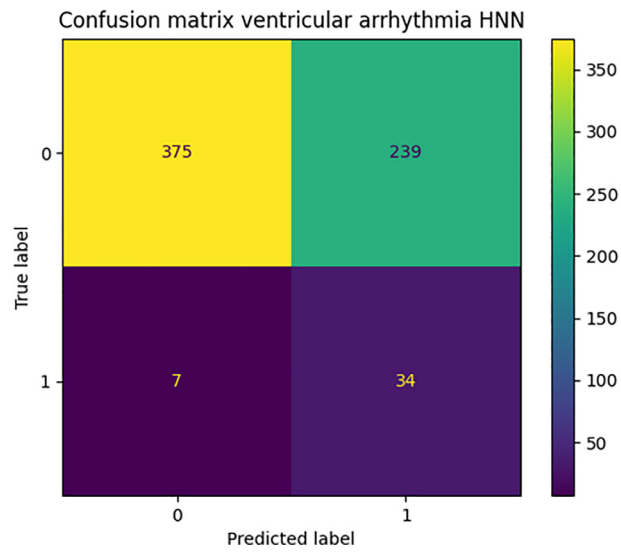**Figure S1** Confusion matrix for AHA plot classifier using multi-label classification approach. AHA, American Heart Association.

Figure S2 Confusion matrix for AHA plot classifier using cluster classification approach. AHA, American Heart Association.

Figure S3 Confusion matrix for mortality prediction model using HNN. HNN, hybrid neural network.

Figure S4 Confusion matrix for ventricular arrhythmia prediction model using HNN. HNN, hybrid neural network.