CALIBRATION AND DISCRIMINATION TESTING

FIGURE 1 shows the distribution of predicted values (probabilities) from the risk-adjustment model.

Minimum = 0.00002043 = 0.0024%

25th percentile = 0.00008826 = 0.0088%

Median = 0.0001766 = 0.018%

Mean = 0.0004447 = 0.044%

75th percentile = 0.0004197 = 0.042%
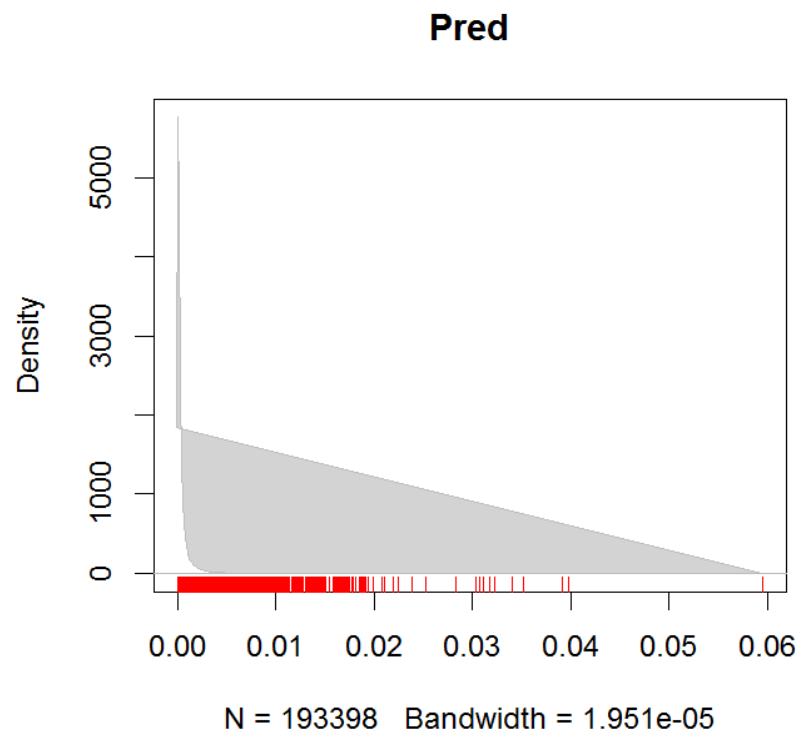
Maximum = 0.05952 = 5.95%

Pred

FIGURE 2 shows the receiver operating characteristic (calibration) curve from the holdout test set in feature selection (AUC = 0.78)
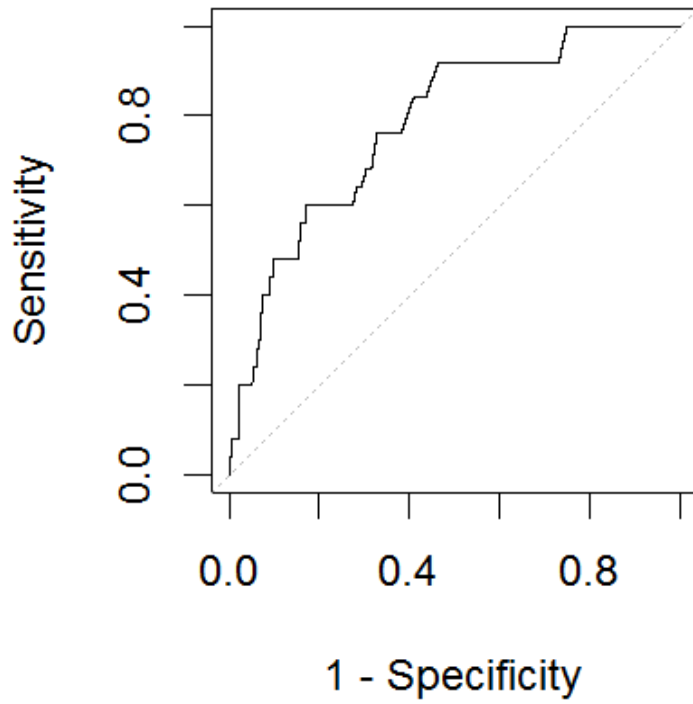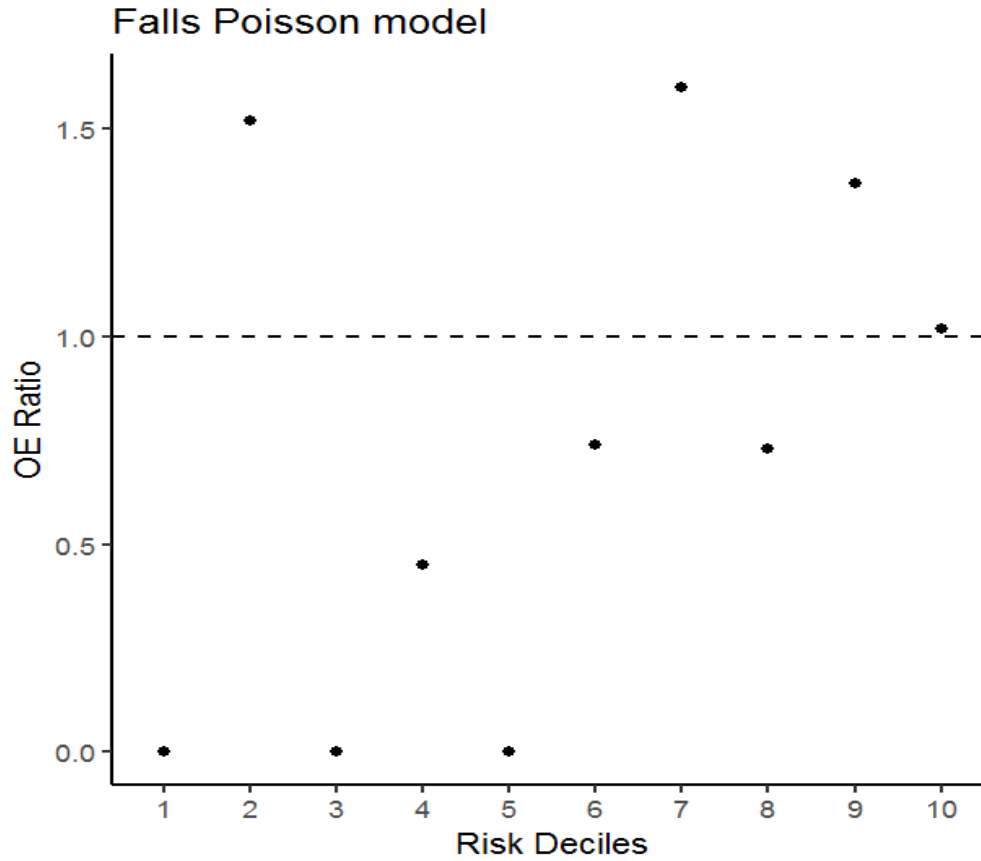

ROC - P: 25, N: 57994

FIGURE 3 shows the Hosmer-Lemeshow decile calibration plot from the final risk-adjustment model. The results are unstable due to a small number of observed events (num_obs) and expected events (num_exp) in all of the bottom five deciles.

Falls Poisson model

```
     decile o_e_ratio num_obs num_exp numrecs
     <int>    <dbl>   <int>   <dbl>   <int>
1      1       0        0     0.840   19340
2      2      1.52       2     1.32   19340
3      3       0        0     1.72   19340
4      4      0.45       1     2.23   19340
5      5       0        0     2.95   19339
6      6      0.74       3     4.04   19340
7      7      1.6        9     5.62   19340
8      8      0.73       6     8.24   19340
9      9      1.37      19    13.9    19340
10    10      1.02      46    45.1    19339
```

Decile	Event rate	% of events
1	0.0000%	0.0%
2	0.0103%	2.3%
3	0.0000%	0.0%
4	0.0052%	1.2%
5	0.0000%	0.0%
6	0.0155%	3.5%
7	0.0465%	10.5%
8	0.0310%	7.0%
9	0.0982%	22.1%
10	0.2378%	53.5%

FIGURE 4 shows the calibration band plot from the final risk-adjustment model. The results are constrained by the maximum expected value of 0.05952 = 5.95%, but the null hypothesis of perfect calibration is not rejected at the p<0.05 level (i.e., p=0.052).

Falls calibration (Poisson)