**Model Parameters for multivariable regression identifying factors predicting low acute pain.**

Logistic regression Number of obs = 32,874

LR chi2(37) = 4250.73

Prob > chi2 = 0.0000

Log likelihood = -19304.174 Pseudo R2 = 0.0992

-------------------------------------------------------------------------------

pscore\_d1\_3lo | Odds Ratio Std. Err. z P>|z| [95% Conf. Interval]

--------------+----------------------------------------------------------------

started\_pre3 | 1.08201 .0430618 1.98 0.048 1.000818 1.169789

preop\_M\_g15 | .5064171 .0145916 -23.61 0.000 .4786107 .535839

pre\_pscore7 | .6073205 .0168401 -17.99 0.000 .5751954 .6412397

pre\_pscore10 | .4766369 .0190737 -18.52 0.000 .4406816 .5155258

preop\_Tram | 1.122285 .0456457 2.84 0.005 1.036294 1.215411

anes\_gen | .6945718 .0217306 -11.65 0.000 .6532602 .738496

anes\_nb | 1.104896 .0428118 2.57 0.010 1.024093 1.192074

pca | 1.089882 .0469311 2.00 0.046 1.001673 1.185858

y12\_13 | .8579492 .02585 -5.08 0.000 .808751 .9101401

y14\_16 | .7951576 .0246381 -7.40 0.000 .7483049 .8449438

reg\_MW | .8541839 .0376454 -3.58 0.000 .7834972 .931248

reg\_SE | 1.154309 .0494211 3.35 0.001 1.061398 1.255353

reg\_C | 1.145146 .0506184 3.07 0.002 1.050112 1.248781

reg\_NE | .9082913 .0468662 -1.86 0.062 .8209272 1.004953

race\_b | .8517972 .0312639 -4.37 0.000 .7926731 .9153313

race\_h | 1.396123 .073293 6.36 0.000 1.259615 1.547425

age70 | 1.710345 .0527945 17.39 0.000 1.609938 1.817014

ageg70 | 2.979618 .1186826 27.41 0.000 2.755853 3.221553

bmi40 | 1.068675 .0349249 2.03 0.042 1.00237 1.139366

bmig40 | 1.114538 .0560809 2.16 0.031 1.009868 1.230058

male | 1.049129 .0538881 0.93 0.350 .9486523 1.160247

painvisit | .9245745 .0458875 -1.58 0.114 .8388726 1.019032

casevol\_lo | 1.282939 .0408564 7.82 0.000 1.20531 1.365568

casevol\_hi | .8443899 .0270712 -5.28 0.000 .792964 .8991508

staffvol\_lo | 1.206972 .0365539 6.21 0.000 1.137412 1.280785

staffvol\_hi | 1.218416 .0384635 6.26 0.000 1.145313 1.296184

comorbid3\_5 | .9994541 .0305375 -0.02 0.986 .9413586 1.061135

comorbidg5 | 1.015454 .0441465 0.35 0.724 .932512 1.105773

pre\_COPD | .8901936 .0302231 -3.43 0.001 .8328853 .9514452

pre\_LiverDis | .8060613 .0463229 -3.75 0.000 .7201966 .9021631

pre\_RheumArth | .9404654 .0664482 -0.87 0.385 .8188447 1.08015

pre\_tob | .8759446 .0301512 -3.85 0.000 .8187986 .9370789

pre\_Alcohol | .9198989 .0425358 -1.81 0.071 .8401964 1.007162

pre\_Drug | .7761093 .0444676 -4.42 0.000 .69367 .8683462

pre\_anxiety | .8758886 .0371984 -3.12 0.002 .805933 .9519164

pre\_Depress~n | .8815422 .0274863 -4.04 0.000 .8292831 .9370946

bpain | .8397448 .0248147 -5.91 0.000 .7924905 .8898168

\_cons | .689313 .049344 -5.20 0.000 .5990785 .7931388

-------------------------------------------------------------------------------

. estat classification

Logistic model for pscore\_d1\_3lo

-------- True --------

Classified | D ~D | Total

-----------+--------------------------+-----------

+ | 4375 2976 | 7351

- | 7372 18151 | 25523

-----------+--------------------------+-----------

Total | 11747 21127 | 32874

Classified + if predicted Pr(D) >= .5

True D defined as pscore\_d1\_3lo != 0

--------------------------------------------------

Sensitivity Pr( +| D) 37.24%

Specificity Pr( -|~D) 85.91%

Positive predictive value Pr( D| +) 59.52%

Negative predictive value Pr(~D| -) 71.12%

--------------------------------------------------

False + rate for true ~D Pr( +|~D) 14.09%

False - rate for true D Pr( -| D) 62.76%

False + rate for classified + Pr(~D| +) 40.48%

False - rate for classified - Pr( D| -) 28.88%

--------------------------------------------------

Correctly classified 68.52%

--------------------------------------------------

. lroc

Logistic model for pscore\_d1\_3lo

number of observations = 32874

area under ROC curve = 0.7098

. estat gof, group(10) t

Logistic model for pscore\_d1\_3lo, goodness-of-fit test

(Table collapsed on quantiles of estimated probabilities)

+----------------------------------------------------------+

| Group | Prob | Obs\_1 | Exp\_1 | Obs\_0 | Exp\_0 | Total |

|-------+--------+-------+--------+-------+--------+-------|

| 1 | 0.1409 | 352 | 344.1 | 2936 | 2943.9 | 3288 |

| 2 | 0.1954 | 527 | 554.2 | 2760 | 2732.8 | 3287 |

| 3 | 0.2450 | 766 | 724.3 | 2522 | 2563.7 | 3288 |

| 4 | 0.2944 | 855 | 887.2 | 2432 | 2399.8 | 3287 |

| 5 | 0.3439 | 1065 | 1048.7 | 2222 | 2238.3 | 3287 |

|-------+--------+-------+--------+-------+--------+-------|

| 6 | 0.3961 | 1218 | 1216.1 | 2070 | 2071.9 | 3288 |

| 7 | 0.4535 | 1382 | 1394.2 | 1905 | 1892.8 | 3287 |

| 8 | 0.5155 | 1599 | 1589.4 | 1689 | 1698.6 | 3288 |

| 9 | 0.5948 | 1800 | 1816.3 | 1487 | 1470.7 | 3287 |

| 10 | 0.8344 | 2183 | 2172.4 | 1104 | 1114.6 | 3287 |

+----------------------------------------------------------+

number of observations = 32874

number of groups = 10

Hosmer-Lemeshow chi2(8) = 7.64

Prob > chi2 = 0.4689