

ERHS 642 Logistic Regression Spring 2016

Homework Assignment 10

Consider the **ICU_altered** data set.

1.
 - a. Present a table containing coefficients, standard errors, Wald Chi-Square values and p-values for your final model from homework assignment 6
 - b. Present a table containing odds ratios, 95% confidence intervals and p-values for your final model from homework assignment 6.
2. Determine how well your model predicts the outcome,
 - a. Plot the ROC curve, determine the area under the ROC curve and draw conclusions
 - b. Plot sensitivity and specificity vs. possible cutpoints and select the “best” cutpoint
 - c. Based on this cutpoint, calculate sensitivity and specificity
 - d. Draw conclusions based on your results in part c. Include definitions of sensitivity and specificity and specifically address limitations of sensitivity and specificity in assessing model fit; how may the limitations have affected sensitivity and specificity in your model (show evidence).
 - e. Calculate the positive and negative predictive value assuming the prevalence of the outcome in the population of interest is 30% and assuming the prevalence of the outcome in the population of interest is 10%.
 - f. Draw conclusions based on your results in part e. Include definitions of positive and negative predictive values.