Hospital variation in mortality in serious infections in SLE

1. For the initial logistic, using sepsis\_sle dataset (N=4001):

dep var is DEAD (0/1)

Indep var are: male (0/1)

Agecat (1 = 18-29; 2 = 30-49; 3 = 50-59; 4 = 60-64) (age as continuous is also included but association is likely nonlinear)

Payer (1 = Medicare; 2 = Medicaid; 3 = private; 4 = other)

Zipinc\_qrtl (1,2,3,4 = quartile of income by ZIP code, ordered low to high)

Slecomb\_cat (comorbidity count as categorical: 0 = 0; 1 = 1 to 3; 2 = 4 or 5;

3 = 6 or 7; 4 = 8 or more; higher scores mean sicker)

(slecomb is also included as continuous but again association is likely nonlinear)

Ventilator (0/1) ventilator was used; measure of severity

Year

Cluster var is: hospid (unique identifier for each hospital)

Patient identifier is: key

2. Once we have hospital-specific adjusted mortality proportions, we can use 4 other variables to look at whether particular hospital characteristics are associated with variations in mortality:

Hosp\_region: NE, Midwest, South, West

Bedsize: 1,2,3 for small, med, large

Teach: 1,2,3 for rural, urban non-teaching, urban teaching

Highvolume (0/1) hospital sees a high volume of SLE patients per year

3. For the comparison of lupus and non-lupus outcomes, we would repeat #1 on both the sepsis\_sle dataset and the sepsis\_nonlupus dataset, but substitute elix\_score for slecomb\_cat as the comorbidity measure, because the nonlupus patients don’t have a slecomb score.

Elix\_score is continuous from -19 to +87 , prob should be made categorical because associations are again likely nonlinear.

We would be interested in the correlation between adjusted mortality for SLE vs. nonSLE as the same hospital. The universe of hospitals is the same for both datasets, based on eligibility of the SLE set.