Reliability formula

Reliability = \( \frac{\sigma^2}{\sigma^2 + V} \)

where \( \sigma^2 \) is the systematic variance between hospitals and \( V \) is the sampling variance of the sample estimate of a hospital’s rate (both on the probability scale):

- \( \sigma^2 = \sigma_L^2 p^2 (1-p)^2 \), where \( \sigma_L^2 \) = variance component from model output in logit scale
- \( V = p(1-p) / N \), where \( p \) = the overall readmission rate across all hospitals and \( N \) = the hospital’s volume.