Formulas

$$-2(L_0 - L_1)$$

loglinear model $\log(\mu) = \alpha + \beta x$

linear prob. model $\pi(x) = \alpha + \beta x$

logistic regr. model $\pi = \frac{\exp(\alpha+\beta x)}{1+\exp(\alpha+\beta x)}$

logistic regr. model $\log(\frac{\pi}{1-\pi}) = \alpha + \beta x$

$\hat{\pi} = 0.5$ at $x = -\hat{\alpha}/\hat{\beta}$

incremented rate of change $= \hat{\beta}\hat{\pi}(1 - \hat{\pi})$

multiple logistic regr. model

$\text{logit}(\pi) = \alpha + \beta_1 x_1 + \cdots + \beta_k x_k \qquad \pi = \frac{\exp(\alpha+\beta_1 x_1+\cdots+\beta_k x_k)}{1+\exp(\alpha+\beta_1 x_1+\cdots+\beta_k x_k)}$

Wald statistic is $z = \hat{\beta}/SE$ or z^2

LR statistic $= -2(L_0 - L_1) =$ change in deviance

Standardized residual $=$ (observed $-$ fitted)$/SE$