Figure 3 - The maximum likelihood method.

Maximum Likelihood Approach

- All hospitals ($N = 336$)
  - Group 1: Hospitals with ($K_i, M_i$) available ($n_1 = 31$)
  - Group 2: Other hospitals: only $M_i$ available ($n_2 = 305$)

Estimate $V(p)$ distribution $V(p)$ of reporting quotes

Likelihood Function $L(M, K, \alpha)$

Likelihood Function $L(M, \hat{V}(p), \alpha)$

Maximum Likelihood

$$\hat{\alpha} = \arg \max \left[ L(M, K, \alpha) \cdot L(M, \hat{V}(p), \alpha) \right]$$

Estimated incidence $\hat{\alpha}$