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Data

1. N: Total FluSurv-NET (FSN) population (given stratum, e.g. age group etc.)
2. M: Total US population
3. n_H: Number of observed influenza hospitalizations with non-lethal outcome
4. n_H^*: Number of total (observed and unobserved) influenza hospitalizations with non-lethal outcome
5. λ_H: Rate of non-lethal flu hospitalizations per population
6. n_D: Observed influenza deaths
7. n_D^*: Total (observed and unobserved) influenza deaths
8. p_k: Probability influenza-associated outcomes ($k = 0$: non-lethal, $k = 1$: lethal) that are correctly attributed to influenza
9. $t_{k,j}$: Numbers tested by outcome and test type (1: PCR, 2: Rapid, 3: Other, 4: No test)
10. ρ_k: Prior dist. for test sensitivities (PCR, rapid; mean, SD) by outcome

$$n_H^* \sim \frac{(\lambda_H N)^{n_H^*} e^{-\lambda_H N}}{(\lambda_H N)!} \tag{1}$$

$$n_H \sim \binom{n_H^*}{n_H} p_0^{n_H} (1 - p_0)^{n_H - n_H} \tag{2}$$