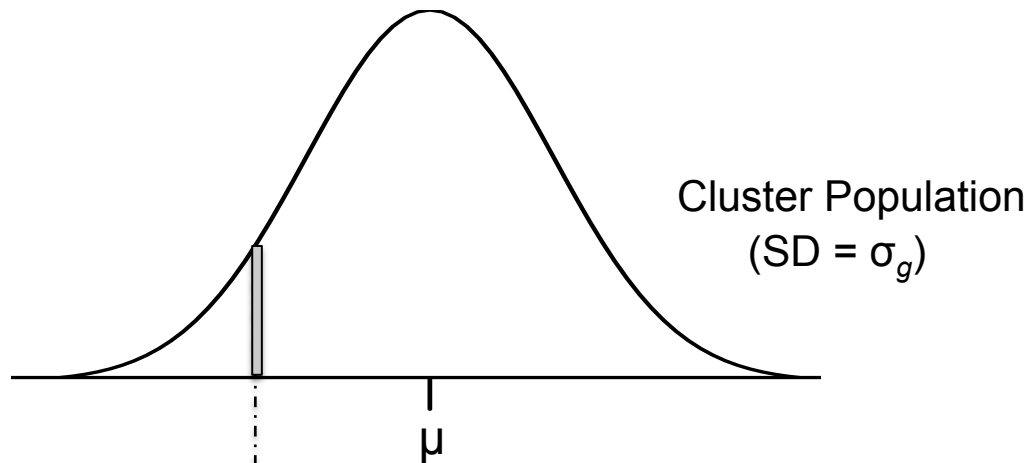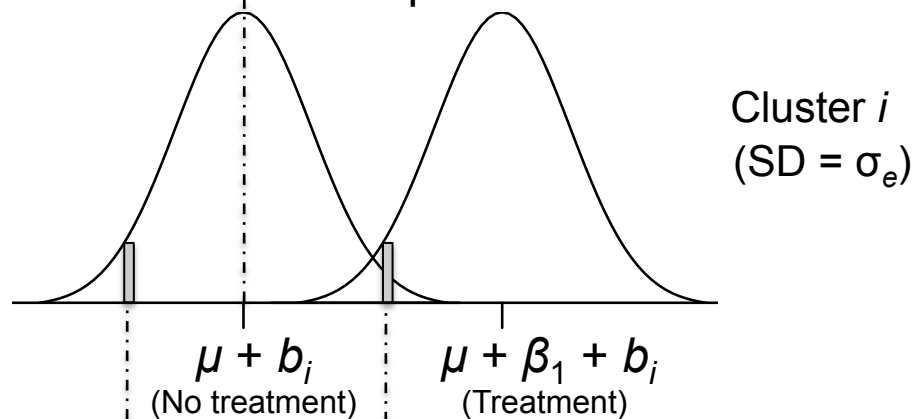## Simulation Steps

1. Assume a baseline mean and cluster level standard deviation

2. Draw a random effect b_i for each cluster i

3. Assign treatment or no treatment to cluster i

4. Draw error term for child j in cluster i, compute y_{ij}

Cluster Population
(SD = σ_g)

μ

Cluster i
(SD = σ_e)

$\mu + b_i$
(No treatment)

$\mu + \beta_1 + b_i$
(Treatment)

$y_{ij} = \mu + b_i + \varepsilon_{ij}$ <u>or</u> $y_{ij} = \mu + \beta_1 + b_i + \varepsilon_{ij}$ Child ij