Simulation-Based Statistical Power Calculator

Run simulation

Sample Sizes

Number of clusters per arm (m)

2 → Default = 25

~~Sampled~~ Number units per cluster (n)

100 → Default = 30

Variance/Covariance

[Can we include an option for Design effect instead of ICC (not a priority)]

Variance

0

Intra-Cluster Correlation (ICC) → Hover over and get equation? $\left[\frac{\sigma^2_{Between}}{\sigma^2_{Total}} \right]$

0.028 → Sliding Scale 0.0 - 1.0

Text: ICC is the ~~variance between~~ fraction of the total variance that is attributable to between cluster variance. An ICC ≅ 0 approximates an individually randomized control study. An ICC ≅ 1 means that cluster differences are very important.

Treatment Parameters

~~Baseline~~ Prevalence under control conditions

0.78

~~Max~~ Prevalence under treatment conditions

0.78

~~Min~~ Prevalence under treatment conditions

0.6

Can this be only 1 variable?

[Can we include OR or RR options later?]

text: Prevalence under ~~[illegible]~~ control conditions can the be estimated using either baseline values pilot data, or literature. Prevalence under treatment is the estimated ~~prevalence~~ minimum Prev. you want to detect

Number of intervals to test

5

Power and Simulation Parameters

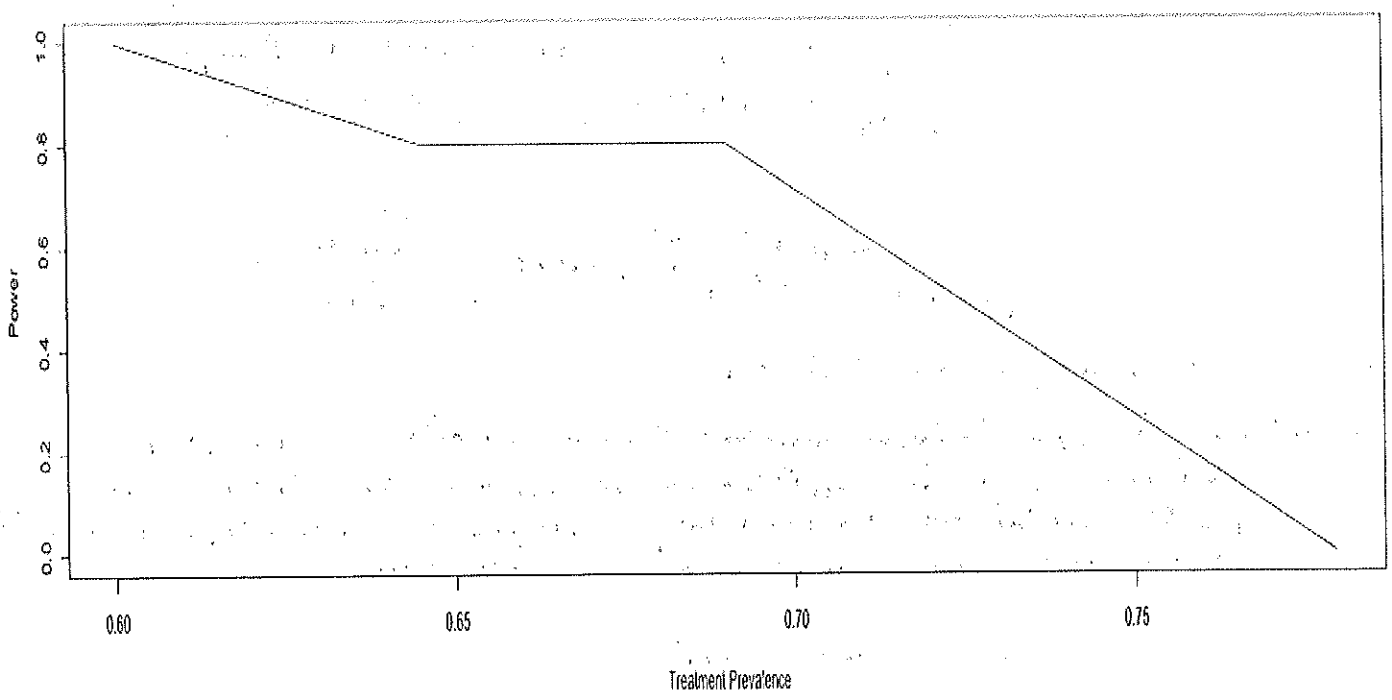
Alpha (α)

0.05

text. α is the probability of type I error, typically set a 0.05.

Number of Simulation Iterations

10



	Treatment Prevalence	Power
1	0.78	0.00
2	0.73	0.40
3	0.69	0.80
4	0.65	0.80
5	0.60	1.00

Design

- Single Population
- RCT / difference between groups
- LQAS

Outcome

- Binary
- Continuous
- Count

Allocation

- Individual
- Cluster

Number of followups

- #

ESTIMATE

- Power
- Sample Size