Simulation Assumptions for the comparison of DOOR confidence intervals

The different methods for the calculation of the DOOR confidence intervals will be compared in a simulation study. We will investigate the width of the confidence intervals and the true coverage probability.

We will take into account the following simulation parameters:

1. Confidence Level 1- α= 0.95
2. Number of simulation repetitions r = 10,000 (for a start)
3. Two Treatment Arms
4. Increasing number of DOOR levels K = 3,4,5
5. Increasing “Treatment effect”, i.e. increasing true DOOR probability.
6. Sample size
7. Confidence-Interval Method
   1. For , number of bootstrap samples

To achieve an increasing true DOOR probability , we will investigate the following scenarios:

**Table 1: Simulation Scenarios for DOOR levels**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Scenario 1 | | Scenario 2 | | Scenario 3 | |
| DOOR level |  |  |  |  |  |  |
|  | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.6 |
|  | 0.2 | 0.2 | 0.2 | 0.6 | 0.2 | 0.2 |
|  | 0.6 | 0.6 | 0.6 | 0.2 | 0.6 | 0.2 |

(If you agree with these suggestions, I will provide scenarios for increasing number of DOOR levels ).