

# Package: MPBoost (via r-universe)

October 12, 2024

**Type** Package

**Title** Treatment Allocation in Clinical Trials by the Maximal Procedure

**Version** 0.1-6

**Date** 2024-01-15

**Author** Ignacio López-de-Ullibarri [aut, cre]

**Maintainer** Ignacio López-de-Ullibarri

<ignacio.lopezdeullibarri@udc.es>

**Description** Performs treatment allocation in two-arm clinical trials by the maximal procedure described by Berger et al. (2003) <doi:10.1002/sim.1538>. To that end, the algorithm provided by Salama et al. (2008) <doi:10.1002/sim.3014> is implemented.

**License** GPL (>= 2)

**Imports** Rcpp (>= 1.0.5)

**LinkingTo** Rcpp, BH

**Depends** R (>= 4.1.0)

**Suggests** knitr, pinp, rmarkdown

**VignetteBuilder** knitr

**NeedsCompilation** yes

**Encoding** UTF-8

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**Repository** <https://iullibarri.r-universe.dev>

**RemoteUrl** <https://github.com/cran/MPBoost>

**RemoteRef** HEAD

**RemoteSha** e7697a887f7423a6d987ecbcb0f8593c87b0e341

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 MPBoost-package

*Treatment Allocation in Clinical Trials by the Maximal Procedure*


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### Description

Performs treatment allocation in two-arm clinical trials by the maximal procedure described by Berger et al. (2003) <doi:10.1002/sim.1538>. To that end, the algorithm provided by Salama et al. (2008) <doi:10.1002/sim.3014> is implemented.

### Details

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### Author(s)

Ignacio López-de-Ullibarri

Maintainer: Ignacio López-de-Ullibarri <ignacio.lopezdeullibarri@udc.es>

### References

Berger, V. W., Ivanova, A., Knoll, M. D. (2003). Minimizing predictability while retaining balance through the use of less restrictive randomization procedures. *Statistics in Medicine*, 22: 3017-3028. [doi:10.1002/sim.1538](https://doi.org/10.1002/sim.1538).

Salama, I., Ivanova, A., Qaqish, B. (2008). Efficient generation of constrained block allocation sequences. *Statistics in Medicine*, 27, 1421-1428. [doi:10.1002/sim.3014](https://doi.org/10.1002/sim.3014).

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 mpboost

*Compute Allocation Sequences by the Maximal Procedure*


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### Description

This function produces a treatment assignment sequence generated according to the maximal procedure of Berger et al. (2003). It is an implementation of the algorithm proposed by Salama et al. (2008).

### Usage

```
mpboost(N1, N2, MTI = 2L)
```

**Arguments**

|     |  |
|-----|--|
| N1  | An integer specifying the size of the sample assigned to treatment 1.          |
| N2  | An integer specifying the size of the sample assigned to treatment 2.          |
| MTI | An integer specifying the maximum tolerated imbalance (MTI). The default is 2. |

**Value**

A vector of N1 1's and N2 2's representing the allocation sequence.

**Note**

See the package's vignette for more details and further examples of the use of the function.

**References**

- Berger, V. W., Ivanova, A., Knoll, M. D. (2003). Minimizing predictability while retaining balance through the use of less restrictive randomization procedures. *Statistics in Medicine*, 22: 3017-3028. [doi:10.1002/sim.1538](https://doi.org/10.1002/sim.1538).
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**Examples**

```
#\donttest{  
mpboost(N1 = 25, N2 = 25, MTI = 3)  
#}
```

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