

Package ‘mergedblocks’

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Type Package

Title Merged Block Randomization

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Description Package to carry out merged block randomization (Van der Pas (2019), <doi:10.1177/1740774519827957>), a restricted randomization method designed for small clinical trials (at most 100 subjects) or trials with small strata, for example in multicentre trials. It can be used for more than two groups or unequal randomization ratios.

Imports randomizeR

License GPL-3

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Suggests knitr, rmarkdown

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mergedblocks

Merged block randomization

Description

Function to carry out merged block randomization, a restricted randomization method designed for small clinical trials (at most 100 subjects) or trials with small strata, for example in multicentre trials. It can be used for more than two groups or unequal randomization ratios.

Usage

```
mergedblocks(n, ratio = c(1, 1), labels = as.character(1:length(ratio)))
```

Arguments

n	The number of subjects to randomize.
ratio	The desired randomization ratio, given as a vector. Default is 1:1 randomization, but more groups or unequal ratios are possible as well. E.g. for 1:1:2 randomization, use c(1, 1, 2).
labels	The labels for the assignments, given as a vector, e.g. c("treatment", "placebo"). The length of labels should match the length of ratio. Default is to use numeric labels.

Value

Allocation of the subjects, given as a vector.

References

S.L. van der Pas (2019). Merged block randomisation: a novel randomisation procedure for small clinical trials. *Clinical Trials* 16(3):246-252.

See Also

[mergedblocksmulti](#) to create allocations for multiple strata at the same time.

Examples

```
#Randomize 20 patients, 1:1 allocation, with labels "0" and "1".
mergedblocks(20)

#Randomize 50 patients, 1:1 allocation with labels "treatment" and "placebo".
mergedblocks(100, labels = c("treatment", "placebo"))

#Randomize 100 patients, 1:2:2 allocation with labels "placebo",
#"treatment 1", and "treatment 2".
mergedblocks(100, c(1, 2, 2), c("placebo", "treatment 1", "treatment 2"))
```

mergedblocksmulti *Merged block randomization for multiple strata*

Description

Function to carry out merged block randomization, for multiple strata.

Usage

```
mergedblocksmulti(  
  K,  
  n,  
  ratio = c(1, 1),  
  labels = as.character(1:length(ratio))  
)
```

Arguments

K	The number of strata.
n	The number of subjects to randomize. May be given as a single number, for the same number of subjects per stratum, or as a vector of length K in case the desired sample size varies per stratum
ratio	The desired randomization ratio, given as a vector. Default is 1:1 randomization, but more groups or unequal ratios are possible as well. E.g. for 1:1:2 randomization, use c(1, 1, 2).
labels	The labels for the assignments, given as a vector, e.g. c("treatment", "placebo"). The length of labels should match the length of ratio. Default is to use numeric labels.

Value

Allocation of the subjects, given as a dataframe, with one column per stratum. Padded with NAs in case of different sample sizes per stratum.

References

S.L. van der Pas (2019). Merged block randomisation: a novel randomisation procedure for small clinical trials. *Clinical Trials* 16(3):246-252.

See Also

[mergedblocks](#) for a version for a single stratum.

Examples

```
#Four strata, randomize 20 patients for each stratum, 1:1 allocation,  
#with labels "0" and "1".  
mergedblocksmulti(K = 4, n = 20)
```

```
#Three strata, randomize 30, 40 and 50 patients for each stratum,  
#1:2 allocation, with labels "placebo" and "treatment".  
mergedblocksmulti(K = 3, n = c(30, 40, 50), ratio = c(1, 2), labels = c("placebo", "treatment"))
```

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