Generate a randomization schema for 100 people with a 1:1 T:C ratio.

* Describe how to do this.
* [0,0,0…..1,1,1] 🡺 “shuffle it” “sampling without replacement”
* Rep(sample 🡺 DON’T do THIS
* Use replicate() function

I have 3 sites that need the same randomization schema

* Apply the first method 3 times

What if the longest run of the same type of treatment should be 10? Blocksize =10

* Apply the first method using only 10 people, repeat that 10 times

One site, 100 subjects, blocksize 10, T:C 3:2

* Create original vector with 6 ones and 4 zeros

If I give you #sites, #subjects at each site, blocksize for all sites, and T:C for all sites, could you program it? #sites <=10; #subjects <=100; blocksize <=20; T:C can be any integer ratio

Why Block?

BLOCK will have the specifed number of subjects in the ratio given, in random order

BLOCKSIZE=6 T:C is 2:1 🡺 (T T C T T C) 🡺 randomize order 🡺 (T T T C T C)

Reduce the number of “runs” of a particular treatment

(C C T T T T) (T T T T C C) 🡺 I don’t like a run of 8 🡺

BLOCKSIZE=3 (T T C) 🡺 worst case (C T T) (T T C) longest run is 4

What might my request for your demonstration be? (Examples)

* I would like 3 sites with 25 subjects per site in a blocksize of 5 and in a 3:2 T:C schema
* I would like 2 sites with 50 subjects per site in a blocksize of 10 and in a 2:3 T:C schema
* I would like 1 site with 50 subjects per site in a blocksize of 10 and in a 2:1 T:C schema 🡺 error

Example: I would like 2 sites with 6 subjects per site in a blocksize of 3 and in a 1:2 T:C schema

AAA01T AAA02C AAA03C AAA04C AAA05C AAA06T

BBB01C BBB02T BBB03C BBB04T BBB05C BBB06C

Work product is a live demonstration of your code to a prospective client company interested in purchasing software for this application.