

subject presents with *neuropathic pain*, so this subject is randomized to the treatment arm. The goal of stratification and allocation is to ensure that roughly equal numbers of subjects with a particular characteristic end up in the treatment arm and in the placebo arm.

Where the design of the clinical trial also contains the subgroups of male and female, prospective subjects are randomized into different blocks, that is, men with bone pain, men with neuropathic pain, women with bone pain, and women with neuropathic pain.

In a clinical trial where study design does not have subgroups, subjects entering the trial are allocated by a random order, for example, arm A, arm A, arm B, arm A, arm B, arm A, arm A, arm A, arm B, arm B, and so on. But where stratification is included in the study design, the allocation procedure attempts to ensure that arm A and arm B contain the same proportion of subjects with *bone pain*, the same proportion of subjects who have *neuropathic pain*, the same proportion of subjects who are *male*, and the same proportion of subjects who are *female*.

d. Manual Technique for Allocation

A straightforward technique for allocation utilizes sealed, opaque sequentially numbered envelopes (SNOSE technique) (33,34,35,36). An understanding of this manual technique has the utility of teaching the goal of computerized allocation.

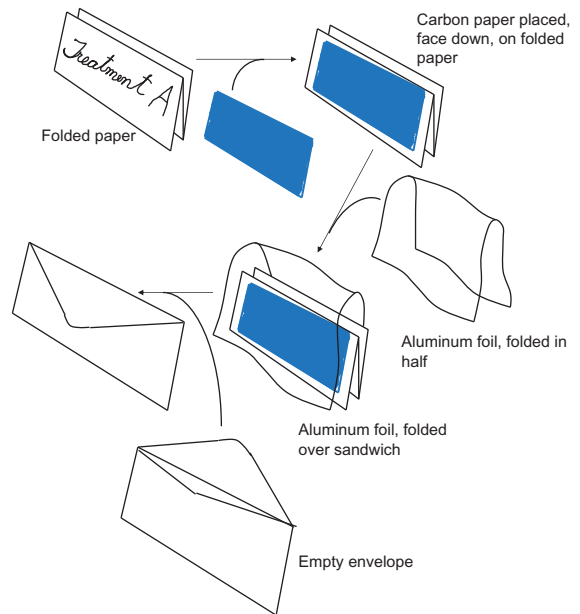


FIGURE 6.1 Sealed envelope technique for allocation and randomization. The sealed envelope technique accomplishes the task of establishing the association of each study subject to one of the study arms.

The following provides materials for allocating subjects for a typical 50-patient trial (Fig. 6.1). The allocation kit requires 50 opaque, letter-sized envelopes, 50 sheets of standard size paper, and 50 sheets of carbon paper. The kit also requires 50 sheets of aluminum foil, cut in rectangles that are as wide as the envelope, but twice as high. The carbon paper should have the same dimensions as the envelope.

³³Doig GS, Simpson F. Randomization and allocation concealment: a practical guide for researchers. *J. Crit. Care* 2005;20:187–93.

³⁴Quirke M, et al. Oral flucloxacillin and phenoxymethylpenicillin versus flucloxacillin alone for the emergency department outpatient treatment of cellulitis: study protocol for a randomised controlled trial. *Trials* 2013;14:164 (6 pp.).

³⁵Galli TT, et al. Effects of transcutaneous electrical nerve stimulation on pain, walking function, respiratory muscle strength and vital capacity in kidney donors: a protocol of a randomized controlled trial. *BMC Nephrol.* 2013;14:7 (6 pp.).

³⁶Liebano RE, et al. Transcutaneous electrical nerve stimulation and conditioned pain modulation influence the perception of pain in humans. *Eur. J. Pain.* 2013;17:1539–46.