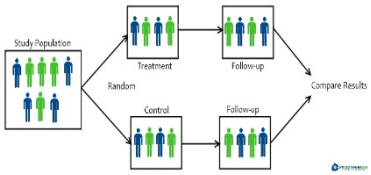
Types of Experimental Studies

Experimental studies compare a predefined (decided before starting) outcome (like death or exacerbations or other event) in **two or more groups** that are **given different types of care or treatment or support**. The strongest types put people into the groups "randomly"(not by the doctors' or researchers' choice) and try to make sure that there are similar people in each of the groups.

Randomized-Controlled (Randomized-Clinical) Trial

"Randomized" means **divided into two groups by chance**.



Participants are assigned to either the group getting the treatment or drug—or the **group getting a "placebo"—an inactive drug**—a "fake" or "dummy" drug by a method like flipping a coin or by a computer program.

Then the **two groups are compared** for the preselected results.

***Answers questions like*:** *Does this new treatment lead to longer life or fewer exacerbations than placebo (no treatment) for this disease?*

Pragmatic Clinical Trials

Study in which participants are assigned to treatments in the settings where they live, work, or receive health care. Other types of studies test how treatments work in carefully controlled settings, but pragmatic studies look at how treatments work in everyday care.

Answers questions like: *Does the addition of a new medication improve outcomes like fewer exacerbations in the COPD patient seen in a medical practice who has co-existing conditions like diabetes or depression? (In most clinical trials of a new medicine, these individuals would be excluded—would not meet the strict "inclusion criteria").*

Comparative Effectiveness Trials

These studies put **people randomly into two or more groups to compare newer medications with other medications**. They are usually done after both types of medications have been shown to work in a randomized clinical or control trial. They often have less intervention like fewer study visits and try to make the study similar to what happens in everyday practice.

Answers questions like: *Is medicine A better than medicine B in improving outcomes?*