Prospective cohort study

In this type of study, a group of individuals (a cohort) is followed over time to assess the development of specific outcomes. Data is collected from the start of the study onwards. Retrospective Cohort Study: Researchers identify a cohort with known exposure or risk factors and then collect historical data to assess the outcomes that occurred in the past. Case-Control Study: In this type of study, individuals with a specific outcome (cases) are compared to individuals without that outcome (controls). Researchers look back in time to determine the exposure or risk factors that may have contributed to the outcome.

A prospective cohort study is a longitudinal cohort study that follows over time a group of similar individuals (cohorts) who differ with respect to certain factors under study, to determine how these factors affect rates of a certain outcome.

For example, one might follow a cohort of middle-aged truck drivers who vary in terms of smoking habits, to test the hypothesis that the 20-year incidence rate of lung cancer will be highest among heavy smokers, followed by moderate smokers, and then nonsmokers.

Prospective biomedical or behavioral research study on human subjects that are designed to answer specific questions about biomedical or behavioral interventions (novel vaccines, drugs, treatments, functional foods, dietary supplements, devices or new ways of using known interventions), generating safety and efficacy data.

They are conducted only after satisfactory information has been gathered that satisfies health authority/ethics committee approval in the country where approval of the therapy is sought.

In undertaking international neurosurgical trials it is useful to understand international patient demographics and potential patient populations that study results will apply to.

A clinical prospective research study in which people who presently have a certain condition or receive a particular treatment are followed over time and compared with another group of people who are not affected by the condition.

Example: For example, the Women’s Health Initiative is a prospective observational study that collects information from a group of older women who are followed over several years.

Replacing RCTs with POS submits patients to management options that have never been proven beneficial, while making them involuntary research subjects of studies that are inevitably biased. A science of practice cannot be an outsider's examination of the behavior of clinicians incapable of questioning their practice. The thesis that Darsaut et al. proposed is that a science of practice must not only eventually determine what best practice will be; It must engage agents involved in medical practice to transparently reveal the uncertainty that calls for management options to be offered under the guidance of declared and controlled care research, to optimize patient outcomes in spite of the uncertainty.

To use POS rather than RCTs in medical practice is to renege on scientific and ethical principles that characterize modern medicine. Instead, we must learn to integrate care research into our practice to provide optimal medical care in real time [1)]

1)

Darsaut TE, Fahed R, Raymond J. Unruptured aneurysms: Why observational studies fall short no matter how “Big” the Data. Neurochirurgie. 2021 Mar 10:S0028-3770(21)00067-9. doi: 10.1016/j.neuchi.2021.02.012. Epub ahead of print. PMID: 33713661.