nature masterclasses

1-day Agenda for Clinical Research Methodology for CHRU Nancy

1. Planning a clinical study (9:00 – 10:30)

- Identifying a relevant research problem
- Assessing the quality of the problem and available resources
- Deciding the right outcomes to measure

The workshop begins by discussing how to properly choose a research question that is necessary for the field. We discuss focusing the research problem in a manageable and realistic manner that is appropriate for the expertise and resources of the researcher. Finally, we review different primary and secondary outcomes related to the research question that should be the focus of the study.

Break (10:30 – 10:45)

2. Choosing the right study design (10:45 – 12:00)

- Hierarchy of clinical relevance
- Important considerations when choosing the study design

This section introduces the various types of study designs available in clinical research along with their clinical relevance. We also discuss things to consider when choosing a design, such as the outcome, available resources and expertise, and goals of the study.

Lunch (12:00 – 13:00)

2. Choosing the right study design (13:00 – 14:10)

- Clinical study designs
- Strengths and limitations to consider

This section discusses systematic reviews, randomized controlled trials (RCTs), cohort studies, case-controlled studies, cross-sectional studies, and case reports/series. We will also highlight their advantages and limitations that should be considered.

Break (14:10 – 14:20)

4. Avoiding common biases (14:20 – 15:30)

- Problems with poorly designed studies
- Common biases in different clinical study designs
- Strategies to minimize biases and improve robustness

This section first begins by emphasizing the importance of a robust study design to increase the chance of publication as well as clinical impact in the field. We then discuss a number of common biases in clinical studies, such as selection bias, measurement bias, attrition bias, and selective reporting and publishing bias. For each of these biases, we review strategies to minimize them in the study to improve the overall robustness of the research study.

Break (15:30 – 15:40)

5. Collecting and analyzing data (15:40 – 16:50)

- Managing the collection of data
- Handling missing data
- Storing and archiving data

The last section of the workshop is focused on data collection and analysis. We begin by discussing how to effectively collect data during the study and how to properly manage all files to ensure that they are easily accessible and understandable by all participating investigators. This also includes how to handle missing data from participants in the study who were lost to follow up or lack of treatment adherence.

Final Q&A (16:50 – 17:00)

This material includes concepts and knowledge that shall not be disclosed outside the client's organization and shall not be duplicated, used or distributed, in whole or in part, for any purpose other than internal review and evaluation.
©2024 Springer Nature. All rights reserved