CIR 869 : SYSTEMATIC REVIEW AND CRITICAL ANALYSIS OF LITERATURE

Workload: 60 h
Credits: 04
Professor: Tulio Pinho Navarro

Discipline Syllabus:

Currently, more than 5,000 scientific articles are published per day. The researcher is not available to read all the articles, even on a specific topic. It is imperative to critically raise relevant literature by means of electronic filters in order to get scientific articles of interest. The researcher should also know if the study design is suitable for his research and identify possible errors of these studies, besides having knowledge of hierarchy of scientific evidence and basic knowledge of statistics, such as accuracy, likelihood ratio, Odds ratio, relative and absolute risk reduction, number needed to treat (NNT), NNH, and confidence interval. Through this discipline, the students will be able to select only articles with appropriate design and scientific evidences acceptable for their type of study, saving time to know critically analyze the scientific literature.

➢ KNOW ASK: what is the topic (stricto sensu) in question? Which Specific question to be answered?

➢ SEARCH: How to look for the best available evidence?
- Keywords
  Secondary sources of demand
  Primary sources of demand
  How to search the Internet

➢ HIERARCHY OF EVIDENCE: What types of study designs And its strength? Advantages and disadvantages of each type of drawing.

➢ Analytical and descriptive, observational and experimental studies:

➢ Systematic reviews and meta-analyzes

➢ Randomized clinical trials

➢ Cohort study

➢ Case series

➢ Qualitative studies

➢ Cross-sectional surveys

➢ Editorials / opinions

- Animal research

- In vitro research (test tube)

- Review of study design types

- Evaluation of study design: is it suitable for research?

- For each type of question there is a type of study. Identification of possible errors in the studies

- Pre-test probability: What is it and what is its application?

- Sensitivity, specificity, positive and negative predictive values, accuracy: It is necessary?

- Likelihood ratios: What is it and what is its application?

- Odds ratio: Is it necessary?

- Relative risk reduction. Absolute risk reduction.

- Number needed to treat (NNT): What is it and what is its application?

- Confidence Interval: What is and what is your application?

- Number needed to harm (NNH): What is and what is your application?

BIBLIOGRAFIA

- JAMA, november 4, n. 17, 1992, vol. 268.

- Prática Clínica Baseada em Evidência – Wanderley Bernardo, 2007.

- What is a sistematyc review? www.whatisseries.co.uk

- What is an NNT? www.whatisseries.co.uk

- What is a meta-analysis? www.whatisseries.co.uk