



# International Federation for Emergency Medicine

## LINKS TO USEFUL RESEARCH TRAINING URLs

### GENERAL ONLINE RESOURCES

Free or very low cost online access to the major journals in biomedical and related social sciences to local, not-for-profit institutions in developing countries.

<http://www.who.int/hinari/training/en/>

National Network of Libraries of Medicine (NN/LM) Training Office tutorials on using PubMed

<https://nnlm.gov/ntc/pubmed-tutorials-recordings/>

<https://learn.nlm.nih.gov/>

Introduction to the Principles and Practice of Clinical Research (IPPCR):

<http://www.cc.nih.gov/training/training/ippcr1.html>

Principles for planning and conducting comparative effectiveness research

<http://www.npcnow.org/publication/principles-planning-and-conducting-comparative-effectiveness-research>

The Fogarty Center list of links and resources

<https://www.fic.nih.gov/Global/Pages/training-resources.aspx>

Research Methods Supercourse - six modules on epidemiology aimed at international researchers.

<http://www.pitt.edu/~super1/ResearchMethods/index4.htm>

Ohio State University School of Public Health online modules on Comparative Effectiveness Research; 19 recorded webinars

<https://cph.osu.edu/hopes/online-training-modules>

Research Administration

<http://www.researchadministrationtools.org/index.html>

Research methods: Beyond the clinical trial.

[http://www.annemergmed.com/article/S0196-0644\(03\)00309-3/fulltext](http://www.annemergmed.com/article/S0196-0644(03)00309-3/fulltext)

Optimal search strategies for retrieving systematic reviews from Medline: analytical survey.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC543864/>

## **ETHICS**

Training modules on international research training ethical issues and regulation

<http://elearning.tree.org/>

Available in English, French, German, Polish and Portuguese:

<http://www.eurecnet.org/materials/index.html>

International Ethical Guidelines for Biomedical Research Involving Human Subjects

[http://www.cioms.ch/publications/guidelines/guidelines\\_nov\\_2002\\_blurb.htm](http://www.cioms.ch/publications/guidelines/guidelines_nov_2002_blurb.htm)

Ethical Complexities of Conducting Research in Developing Countries

<http://www.nejm.org/doi/full/10.1056/NEJM199710023371411>

<http://www.nejm.org/doi/pdf/10.1056/NEJM199710023371411>

The Ethics of Placebo-Controlled Trials--A Middle Ground.

[http://www.or.org/files/Placebo\\_Ethics.pdf](http://www.or.org/files/Placebo_Ethics.pdf)

National Statement on Ethical Conduct in Human Research (Aust)

<https://www.nhmrc.gov.au/guidelines-publications/e72>

World Medical Association Declaration Of Helsinki (Ethics)

<http://www.wma.net/en/30publications/10policies/b3/>

## **CLINICAL TRIALS**

Standard Protocol Items: Recommendations for Interventional Trials

<http://www.spirit-statement.org/spirit-statement/>

The "Best Proven Therapeutic Method" Standard in Clinical Trials in Technologically Developing Countries

<http://www.jstor.org/stable/3564021>

Managing conflicts of interest in the conduct of clinical trials

<http://plaza.ufl.edu/rmelk/BestofBME/Publications/COIresearch.pdf>

## **CASE CONTROL STUDIES**

Case-control studies: Research in reverse

[http://dx.doi.org/10.1016/S0140-6736\(02\)07605-5](http://dx.doi.org/10.1016/S0140-6736(02)07605-5)

Compared to what? Finding controls for case-control studies

[http://www.mwc.com.br/files/L-Epid02-02-Grimes\[A709\]%20-%20Controls%20for%20case-control%20studies.pdf](http://www.mwc.com.br/files/L-Epid02-02-Grimes[A709]%20-%20Controls%20for%20case-control%20studies.pdf)

[http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(05\)66379-9.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(05)66379-9.pdf)

## **COHORT STUDIES**

Cohort studies: marching towards outcomes

<https://docs.google.com/file/d/0B6yPWTdUUHYAYWiybzInc0p6MFk/edit>

Reader's guide to critical appraisal of cohort studies: 1. Role and design.

DOI: [10.1136/bmj.330.7496.895](https://doi.org/10.1136/bmj.330.7496.895)

<http://www.bmj.com/content/330/7496/895>

## **CHART REVIEWS**

Chart reviews in emergency medicine research: Where are the methods?

<http://academicdepartments.musc.edu/medicine/divisions/EmergencyMed/Documents/Research/1996%20Gilbert%20Chart%20review%20methodology.pdf>

Looking through the retrospectoscope: reducing bias in emergency medicine chart review studies.

PMID: [24746846](https://pubmed.ncbi.nlm.nih.gov/24746846/)

## **META-ANALYSIS AND SYSTEMATIC REVIEWS**

Meta-analysis as Evidence. Building a Better Pyramid

<http://jama.jamanetwork.com/article.aspx?articleid=1895230>

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-analysis

<http://www.prisma-statement.org/Default.aspx>

Challenges in conducting systematic reviews

<http://annals.org/article.aspx?articleid=718511>

Systematic reviews and meta-analyses of randomized trials: principles and pitfalls

<http://eurheartj.oxfordjournals.org/content/ehj/35/47/3336.full.pdf>

## **PILOT STUDIES**

Pilot Studies: A Critical but Potentially Misused Component of Interventional Research

<http://jama.jamanetwork.com/article.aspx?articleid=2463266>

<http://www.pubpdf.com/pub/26501530/Pilot-Studies-A-Critical-but-Potentially-Misused-Component-of-Interventional-Research>

## **QUALITATIVE RESEARCH**

Validating scales and indexes

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1122519/>

## RESEARCH EVALUATING DIAGNOSTIC ACCURACY

STARD 2015: An Updated List of Essential Items for Reporting Diagnostic Accuracy Studies

<http://www.equator-network.org/reporting-guidelines/stard/>

Evidence based diagnostics

<http://www.bmj.com/content/330/7493/724>

When is measuring sensitivity and specificity sufficient to evaluate a diagnostic test, and when do we need randomized trials?

<https://www.ncbi.nlm.nih.gov/pubmed/16754927>

## STATISTICS

Short video clips, each addressing a topic in data and statistics

<http://biostatcourse.fiu.edu/>

Introductory statistics

<http://onlinestatbook.com/index.html>

USA National Library of Medicine course on Health Statistics

<https://www.nlm.nih.gov/nichsr/usestats/index.htm>

Confidence intervals assess both clinical significance and statistical significance.

<http://annals.org/article.aspx?articleid=704552>

Predicted Confidence Intervals when planning experiments and the misuse of power when interpreting results

<https://dirnagl.files.wordpress.com/2014/07/goodman-the-use-of-predicted-confidence-intervals-when-planning-experiments-and-the-misuse-of-power-when-interpreting-results-ann-intmed-1994.pdf>

Sample Size Calculation for a Hypothesis Test. Lynne Stokes.

<https://www.aub.edu.lb/sharp/Publications/guide-to-statistics.pdf>

Sample size calculations in randomised trials: mandatory and mystical

[http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(05\)61034-3.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(05)61034-3.pdf)

Advanced Statistics: The Propensity Score—A Method for Estimating Treatment Effect in Observational Research.

[http://www.floppybunny.org/robin/web/virtualclassroom/stats/basics/articles/odds\\_risks/propensity\\_scores\\_newgard\\_2004.pdf](http://www.floppybunny.org/robin/web/virtualclassroom/stats/basics/articles/odds_risks/propensity_scores_newgard_2004.pdf)

Multivariable analysis: a primer for readers of medical research

<http://annals.org/article.aspx?articleid=716349>

## **PUBLISHING**

The Equator Network: a broad range of links and materials designed to help researchers write and publish, particularly guideline-relevant studies.

<https://www.equator-network.org/library/>

Writing Successful Covering Letters for Unsolicited Submissions to Academic Journals

<https://muse.jhu.edu/article/52261>

Authorship for research groups

PMID: [12495400](https://pubmed.ncbi.nlm.nih.gov/12495400/)

## **GRANT WRITING**

An evidence-based guide to writing grant proposals for clinical research.

<http://www.pubpdf.com/pub/15710960/An-evidence-based-guide-to-writing-grant-proposals-for-clinical-research>

## **EMERGENCY MEDICINE ORGANISATIONS**

American College of Emergency Physician's Research page includes a free download of a book: "Research: A Primer"

<http://www.acep.org/research/>

Canadian Association of Emergency Physicians

<http://caep.ca/ResearchOverview>

[http://caep.ca/CanMEDS\\_Research\\_Guide](http://caep.ca/CanMEDS_Research_Guide)

<http://www.mcgill.ca/emergency/links/#ebm>

<http://www.academicemergencymedicine.net>

European Society for Emergency Medicine

<http://www.eusem.org/research/>

Global Emergency Medicine Academy

<http://www.globalem.net/content/links>

Society of Academic Emergency Medicine

<http://saem.org/research/lectures>

**FALCK FOUNDATION** (supports pre-hospital emergency medical research)

<http://www.falckfoundation.com/>

## **FUNDING BODIES**

National Institute of Health (US)

<http://grants.nih.gov/grants/oer.htm>

National Health and Medical Research Council (Aust)

<https://www.nhmrc.gov.au/grants-funding>

## **LIBRARIES**

National Library of Medicine (inc PUBMED)

<http://www.nlm.nih.gov/>

Cochrane library

<http://www.cochranelibrary.com/>

## **METHODS**

CONSORT statement for RCTs

<http://www.consort-statement.org/>

STROBE statement for observational studies

<http://www.strobe-statement.org/>