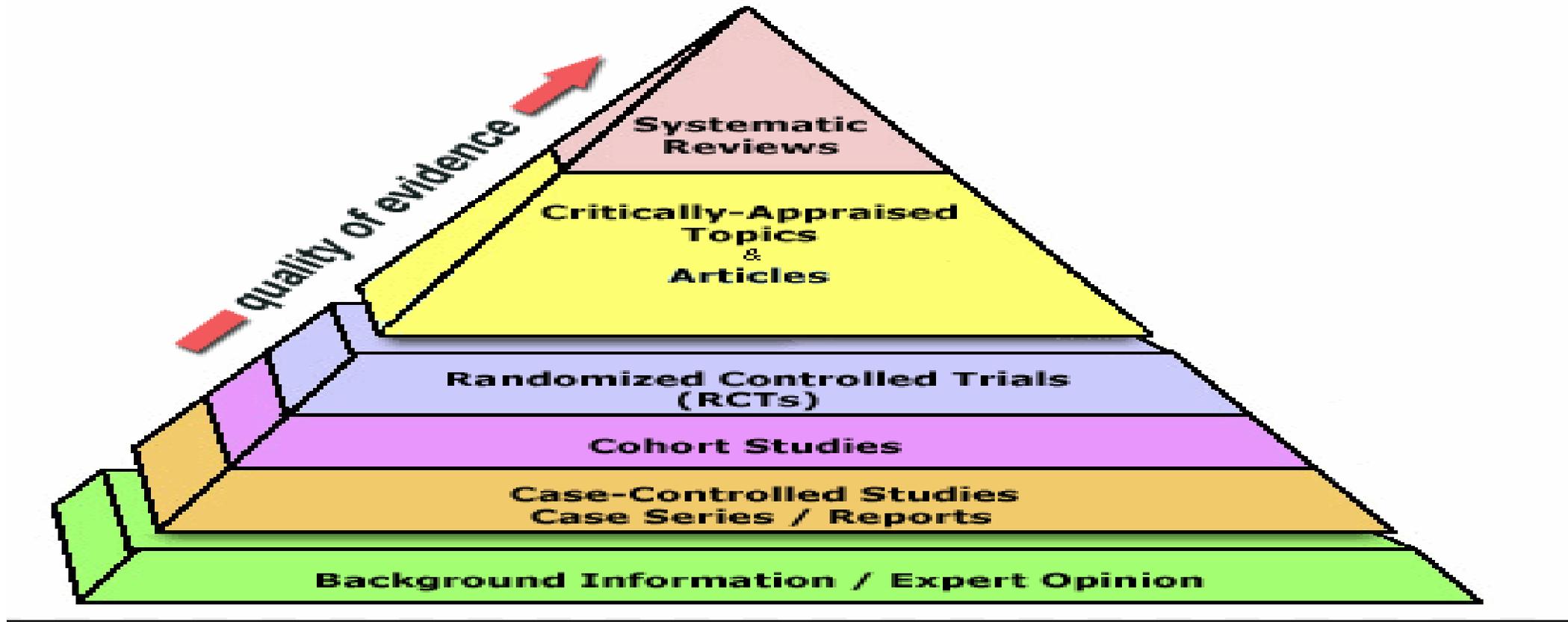


Academic Research Evidence



Background Info/Expert Opinion

- **Credo Reference** - background information, definitions, research terminology, and images from nursing sources
- **Taber's Cyclopedic Medical Dictionary** - definitions, explanations and illustrations from an encyclopedic medical dictionary
- **Ebooks (Gale)** - cross-searchable collection of reference titles
- **National Center for Biotechnology Information (NCBI) Bookshelf** - online books and reports on specific health care and biomedical topics
- **Centers for Disease Control and Prevention (CDC)** - fact sheets, journal articles and statistics related to public health and safety
- **National Center for Complementary and Integrative Health** - practitioner-oriented information on Complementary Alternative Medicine (CAM)
- **Encyclopedic of Nursing Research** - comprehensive and authoritative guide to the nursing literature from the Annual Review of Nursing Research

Case Series and Case Reports

- Case reports - detailed description of a single case
- Case series - descriptions of groups of patients with a disease
- Both used to illustrate an aspect of a condition, treatment, or adverse reaction to treatment
- Neither uses a control group, nor has statistical validity

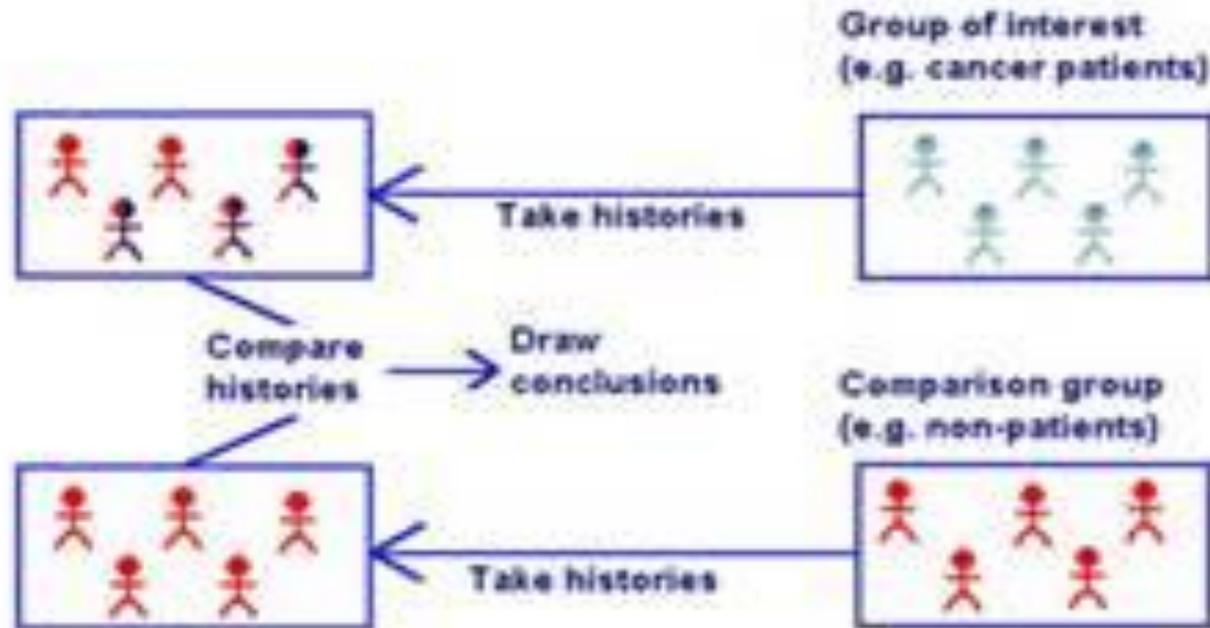
Source: Gonzaga University Lib Guides, Foley Library, <https://tinyurl.com/mrz5z4hc>

Case-Controlled Studies

- Patients are studied based on the presence or absence of the outcome or disease
- Two groups, those with the disease, and those without the disease, are compared to risk factors
- Studies are always retrospective

Source: University of Toledo Lib Guides, <https://tinyurl.com/bdd2fu6b>

Case Control Studies

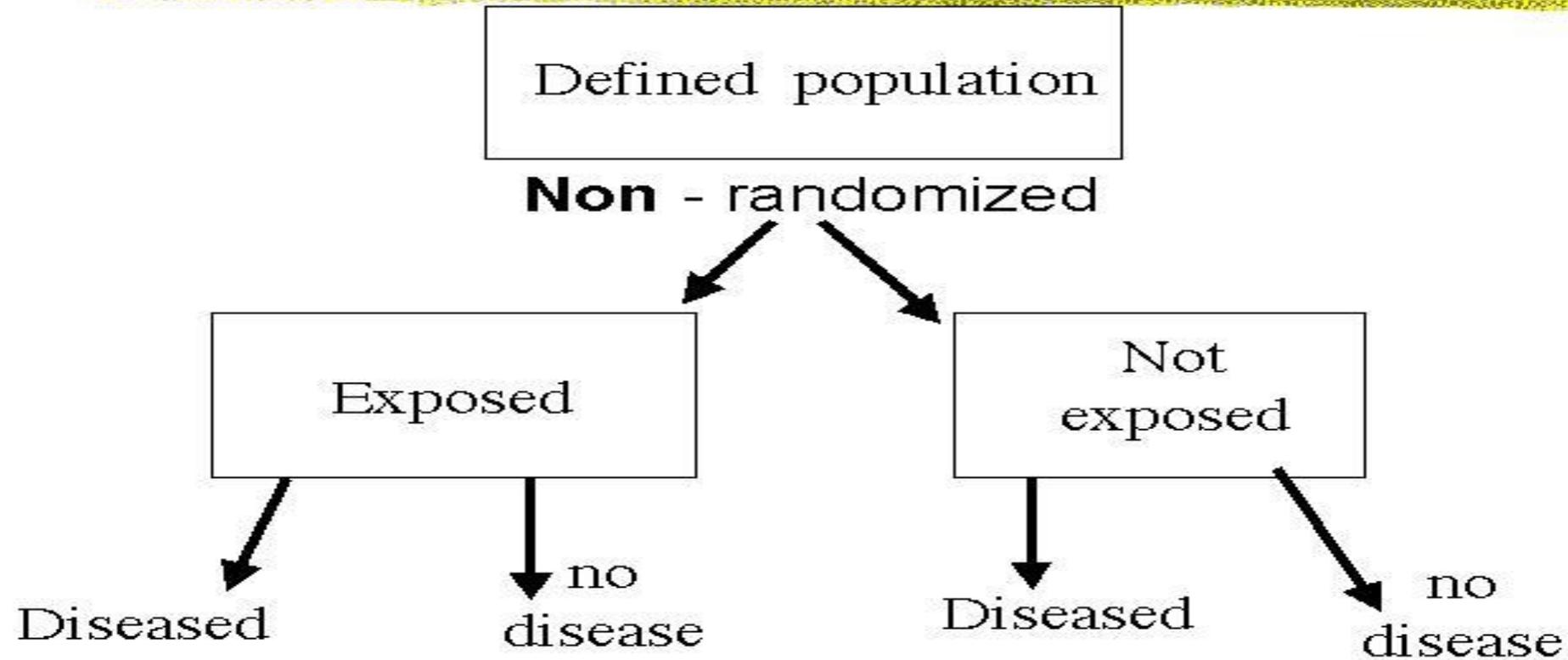


Source: <http://howmed.net/community-medicine/case-control-studies/>

Cohort Studies

- Longitudinal studies with a case-defined population who have exposure or receive a particular treatment, and are followed over time and compared with another group
- Used to establish a causation of a disease to evaluate the outcome or impact of treatment
- Not as reliable as randomized controlled studies
- Requires a large sample size, can take longer periods of time, and inefficient for rare outcomes

Design of a Cohort Study

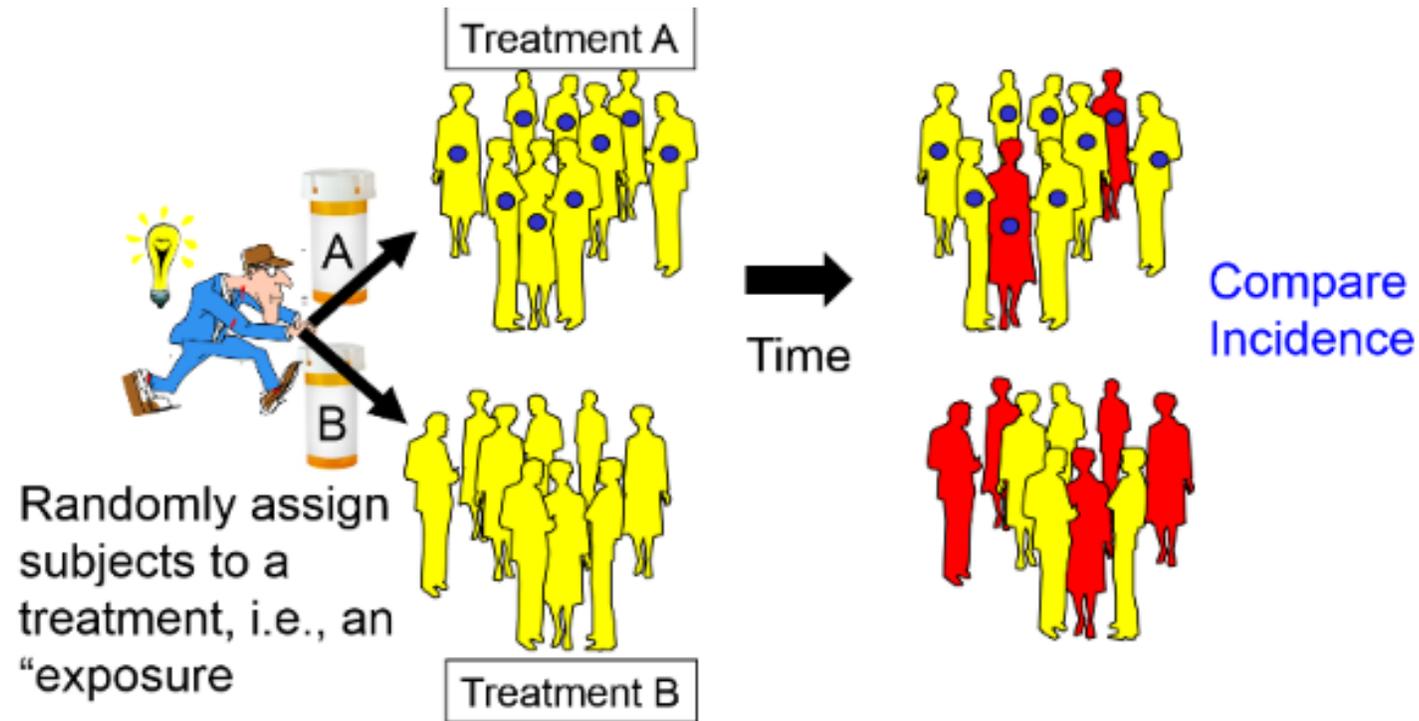


Source: Science Direct, <https://tinyurl.com/mr3kkbtc>

Randomized Clinical Trials

- A study with two groups, treatment group and control group
- The treatment group receives the treatment, and the control group receives either no treatment (placebo) or standard treatment
- Patients are randomly assigned
- Considered the gold standard in research for the effectiveness of different therapies and interventions
- May be a double blind study where neither the researcher nor subject is aware of participating in the study

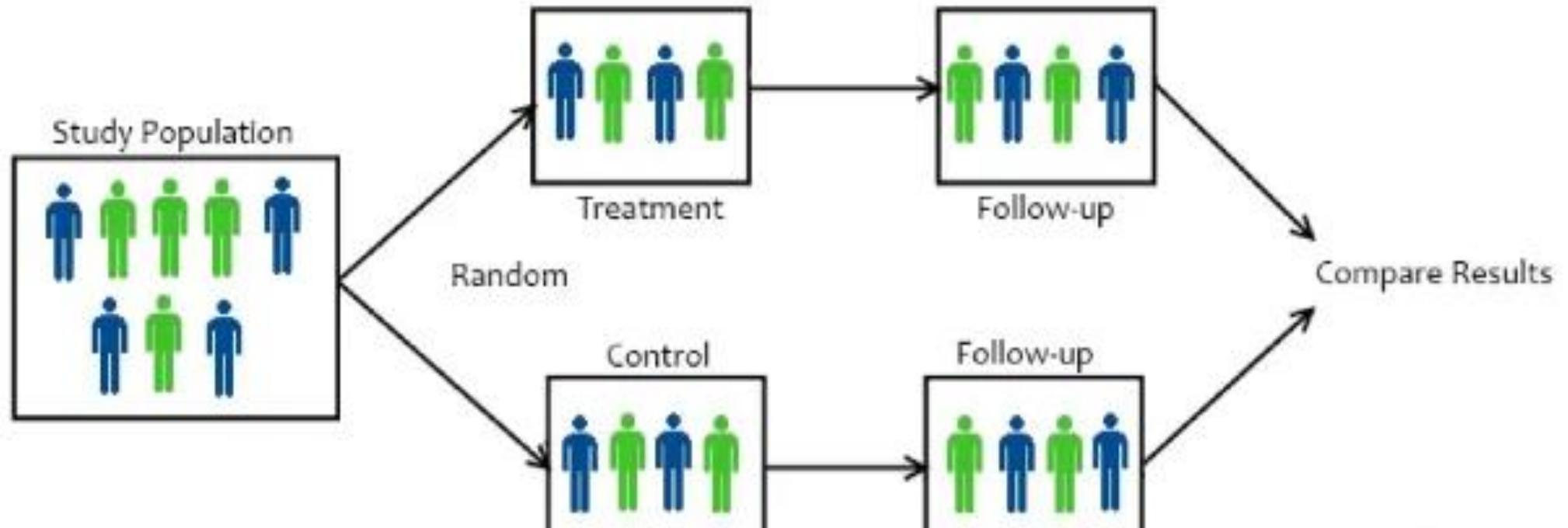
Randomized Controlled Clinical Trial Design



Double Blind Study

- Study in which neither the participants nor the experimenters know who is receiving a particular treatment.
- Utilized to prevent bias in research results.
- Useful for preventing bias due to demand characteristics or the placebo effect

Double Blind Study Design



Type of Question	Suggested Study Type
Therapy	RCT > case control > case series
Diagnosis	Prospective, blind comparison to a gold standard
Etiology/Harm	RCT > cohort > case control > case series
Prognosis	Cohort study > case control > case series
Prevention	RCT > cohort > case control > case series
Clinical Exam	Prospective, blind comparison to a gold standard
Cost	Economic analysis

Source: Research Gate, Appropriate Study Design, <https://tinyurl.com/uhez45f>

Critically Appraised Evidence

- **Clinical Evidence**: summarizes the current state of knowledge about the prevention and treatment of clinical conditions, and describes the best available evidence from systematic reviews, RCTs, and observational studies
- **National Guideline Clearinghouse**: a comprehensive database of evidence-based clinical practice guidelines produced by the Agency for Health Care Research and Quality, updated weekly
- **InfoPOEMS**: clinical awareness system that highlights important new evidence ("Patient-Oriented Evidence that Matters"), critical appraisal of studies published in more than 100 journals
- **PIER**: evidence-based clinical guidance designed for rapid access to clinical information at the point of care, peer-reviewed

Systematic Reviews

- Most reliable source of evidence to guide clinical practice
- Reviews of randomized trials, cross-sectional, or cohort studies
- Explicit and precise, aims to reduce bias
- Predetermined eligibility and relevance criteria
- Transparent and reproducible methods
- Rigorous search designed to locate all eligible studies