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

*Source: DePaul University Lib Guides, https://tinyurl.com/mspwm3nf*
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

Group of interest (e.g. cancer patients)

- Take histories
- Compare histories
- Draw conclusions

Comparison group (e.g. non-patients)

- Take histories

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

Source: British Medical Journals, https://ebn.bmj.com/content/22/4/95
Design of a Cohort Study

Defined population

Non-randomized

Exposed

- Diseased
- No disease

Not exposed

- Diseased
- No disease

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

Source: Tufts University Lib Guides, https://tinyurl.com/22fh5y2r
Randomized Controlled Clinical Trial Design

Randomly assign subjects to a treatment, i.e., an “exposure”

Treatment A

Treatment B

Time

Compare Incidence

Source: Boston University, https://tinyurl.com/mwz67w9u
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.

Source: Scribbr Double Blind Study Methodology, https://tinyurl.com/ybyubxkp
Double Blind Study Design

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Suggested Study Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapy</td>
<td>RCT &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Prospective, blind comparison to a gold standard</td>
</tr>
<tr>
<td>Etiology/Harm</td>
<td>RCT &gt; cohort &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Prognosis</td>
<td>Cohort study &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Prevention</td>
<td>RCT &gt; cohort &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Clinical Exam</td>
<td>Prospective, blind comparison to a gold standard</td>
</tr>
<tr>
<td>Cost</td>
<td>Economic analysis</td>
</tr>
</tbody>
</table>

Source: Research Gate, Appropriate Study Design, https://tinyurl.com/uhedz45f
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

Source: Duquesne University, Gumberg Library, https://tinyurl.com/49rs4zm5
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

Source: Austin Peay Lib Guides, Systematic Review, https://tinyurl.com/4m47efhy