Georgia State University
Library Handbook
for
School of Nursing and Health Professions
&
School of Public Health
2015-2016

www.library.gsu.edu
INTRODUCTION

The ability to identify, locate, evaluate, and use information effectively is an essential skill. Learning library skills will benefit you not just in a class while at Georgia State University but throughout your professional career. This handbook will guide you through the process of gathering information and will provide you with resources to help improve your writing.

The University Library is the center of Georgia State’s campus, both literally and figuratively. Over 100 library faculty and staff members are dedicated to advancing scholarship and furthering the educational and research mission of Georgia State University. The library provides support for campus teaching, learning and research as well as a social space for the university community. The University Library houses over 1.5 million volumes, including 28,000 electronic journals, 2,800 periodicals and newspaper titles, nearly 8,000 active serials, and is a Federal Document Depository with more than 820,000 government documents.

For additional assistance throughout the research process, contact a librarian. Email or call to set up an appointment for a consultation.

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CHAPTER 1: WHERE IS EVERYTHING?

The library’s mailing address is 100 Decatur Street but the library actually has two buildings, Library North and Library South with a bridge (aka link) crossing over Decatur Street joining the two.

<table>
<thead>
<tr>
<th>Library North 1st Floor</th>
<th>Library North 3rd Floor</th>
<th>Library North 4th Floor</th>
<th>Library South 4th Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Main entrance</td>
<td>• Books: PS – PT, R – ZA</td>
<td>• Books: Q’s</td>
<td></td>
</tr>
<tr>
<td>• User Services Desk (check out/reserves)</td>
<td>• Computers, printers</td>
<td>• Bound periodicals</td>
<td></td>
</tr>
<tr>
<td>• Research Support Desk</td>
<td>• Current periodicals</td>
<td>• Government Documents</td>
<td></td>
</tr>
<tr>
<td>• Classroom 1</td>
<td>• Bound periodicals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Computers, printers, copiers</td>
<td>• Computers, printers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Mobile device charging stations</td>
<td>• Mobile device charging station</td>
<td>Library South 5th Floor</td>
<td></td>
</tr>
<tr>
<td>• Microforms</td>
<td></td>
<td>• Subject Librarian Office, suite 542</td>
<td></td>
</tr>
<tr>
<td>• Current newspapers</td>
<td></td>
<td>• Official quiet floor</td>
<td></td>
</tr>
<tr>
<td>• Media: DVDs/Videos/CDs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Saxby’s Café</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Library North 2nd Floor</th>
<th>Library North 4th Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Technology Check out &amp; Support Desk</td>
<td>Library North 4th Floor</td>
</tr>
<tr>
<td>• Classroom 2</td>
<td>• Books: HF5415 – LC3999, LC4000 – PR</td>
</tr>
<tr>
<td>• Reference books</td>
<td>• Computers, printers</td>
</tr>
<tr>
<td>• Computers, printers, copiers, scanners</td>
<td>• Mobile device charging station</td>
</tr>
<tr>
<td>• Mobile device charging station</td>
<td>Library North 4th Floor</td>
</tr>
<tr>
<td>• Print card dispenser</td>
<td>• Official quiet floor</td>
</tr>
<tr>
<td>• Atlases</td>
<td></td>
</tr>
<tr>
<td>• Presentation practice room</td>
<td>Library South 5th Floor</td>
</tr>
<tr>
<td>• Group media viewing rooms</td>
<td>Library South 5th Floor</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Library North South 2nd Floor LINK</th>
<th>Library South 3rd Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ESL tutoring services</td>
<td>• Bound periodicals</td>
</tr>
<tr>
<td>Library South 2nd Floor</td>
<td>• Computers, printers</td>
</tr>
<tr>
<td>Library South 3rd Floor</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Library South 2nd Floor LINK</th>
<th>Library South 3rd Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Back entrance</td>
<td>• Bound periodicals</td>
</tr>
<tr>
<td>• Mobile device charging station</td>
<td>• Computers, printers</td>
</tr>
<tr>
<td>• CURVE</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Library South 2nd Floor LINK</th>
<th>Library South 3rd Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ESL tutoring services</td>
<td>• Bound periodicals</td>
</tr>
<tr>
<td>Library South 2nd Floor LINK</td>
<td>• Computers, printers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Library South 2nd Floor LINK</th>
<th>Library South 3rd Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Special Collections &amp; Archives</td>
<td>• Bound periodicals</td>
</tr>
<tr>
<td>• Colloquium Room</td>
<td>• Computers, printers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Study Rooms</th>
<th>Library South 4th Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 2nd floor, Library North &amp; Link</td>
<td>• Books: Q’s</td>
</tr>
<tr>
<td>• 3rd floor, Library North &amp; Link</td>
<td>• Bound periodicals</td>
</tr>
<tr>
<td>• 4th floor, Library North &amp; Link</td>
<td>• Government Documents</td>
</tr>
<tr>
<td>• 5th floor, Library North &amp; Link</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Law Library</th>
<th>Library South 5th Floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>• 85 Park Place, College of Law</td>
<td>• Subject Librarian Office, suite 542</td>
</tr>
<tr>
<td></td>
<td>• Official quiet floor</td>
</tr>
</tbody>
</table>
CHAPTER 2: THE LIBRARY WEBSITE

The library website should be your first stop when doing research. The major parts of the website are outlined below.

www.library.gsu.edu
CHAPTER 3: LIBRARY DEFINITIONS TO GET YOU STARTED

What is a “catalog”? 

A library catalog is a list of items found in a library. The GSU library’s catalog is called GIL (for GALILEO Interconnected Libraries). The catalog lists the titles and location of various items the library owns, such as:

- Books
- eBooks
- DVDs
- Atlases & Maps

The library catalog also contains records for items in the GSU law library. You may check out books from the law library, but if you want to use one of their databases, you have to use their computers in the Urban Life building.

What is a "database"?

Use databases to find articles. In Libraryland, we use the word "database" to refer to an online, searchable index of records for various materials, usually articles which will contain:

- The citation for the article (title, authors, journal name, year of publication etc.).
- An abstract or summary of the article.
- Some key subject terms that have been added to the article record by professional indexers who’ve read the article and identified its main topics.
- A link/button where you can get (or request) the full article. At GSU look for the button.

The library has hundreds of databases that cover history, art, theology, sociology, business and much more. Because there are so many be sure to use the health science databases to search for articles that are related to your topic. Health sciences databases can be found under your field of study in the Databases by Subject link or Research Guide.

<table>
<thead>
<tr>
<th>Databases have SIMILAR features, like…</th>
<th>Databases have DIFFERENT features, like…</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Basic and advanced search options</td>
<td>• Subject content</td>
</tr>
<tr>
<td>• Can limit/narrow the search</td>
<td>• Appearance of the interface</td>
</tr>
<tr>
<td>• Temporary holding area (e.g., “folder” or clipboard”)</td>
<td>• Dates of coverage (aka “holdings”)</td>
</tr>
<tr>
<td>• Can create long-term personal account</td>
<td>• Update frequency</td>
</tr>
<tr>
<td>• Can print, email, &amp; save citations</td>
<td>• Standardized subject terms</td>
</tr>
<tr>
<td></td>
<td>• Specific search features: truncation, proximity, citation analysis, alerting, etc.</td>
</tr>
</tbody>
</table>

The library databases (and eBooks) are available from off-campus, 24/7.

What is a “journal”?

A journal is a scholarly publication that contains articles presenting original research, literature reviews, editorials, and book reviews. Searching a database allows you to find many articles regardless of which journal they are from. A scholarly journal will be peer-reviewed. Non-scholarly publications are called magazines.
What does “peer-reviewed” mean?

Peer-reviewed (scholarly) articles are reviewed by scholars and other experts in the field before being approved for publication. These scholars have reviewed the article for methodological errors, flaws in judgment, potential bias, originality, etc. In other words, it’s a high-quality article. Only after an article has gone through this rigorous review is it published in a journal with other peer-reviewed articles.

Scholarly journals vs. popular magazines

Here are some descriptions to help you determine the difference between these types of sources:

<table>
<thead>
<tr>
<th></th>
<th>Popular magazines</th>
<th>Peer-reviewed journals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authors</td>
<td>Paid reporters and journalists</td>
<td>Scholars in the field</td>
</tr>
<tr>
<td>Article Acceptance</td>
<td>Articles written by hired reporters.</td>
<td>Undergoes a &quot;peer-review&quot; process.</td>
</tr>
<tr>
<td>Procedure</td>
<td>Edited by magazine editors</td>
<td>Reviewed by other scholars or experts in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the field before being published.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Also called “refereed”, “scholarly” or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“academic.”</td>
</tr>
<tr>
<td>Audience</td>
<td>General public</td>
<td>Scholars, researchers and students</td>
</tr>
<tr>
<td>Content</td>
<td>General information: current events,</td>
<td>Original research or experimentation.</td>
</tr>
<tr>
<td></td>
<td>popular culture, narrative or opinion,</td>
<td>Written in a language for the academic</td>
</tr>
<tr>
<td></td>
<td>data and statistics from organizations.</td>
<td>community.</td>
</tr>
<tr>
<td></td>
<td>Written in easy to understand language.</td>
<td>Contains a complete bibliography.</td>
</tr>
<tr>
<td></td>
<td>Rarely contains a bibliography.</td>
<td></td>
</tr>
<tr>
<td>Overall Appearance</td>
<td>Glossy paper, lots of ads,</td>
<td>Sober and serious, often contain</td>
</tr>
<tr>
<td></td>
<td>heavily illustrated.</td>
<td>tables, graphs and charts.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Few, if any, ads.</td>
</tr>
<tr>
<td>Examples</td>
<td><img src="image1" alt="Popular Magazine Examples" /></td>
<td><img src="image2" alt="Peer-reviewed Journal Examples" /></td>
</tr>
</tbody>
</table>

How can you tell if an article is peer-reviewed when you’re in an online database?

There are two main ways:

1. Some databases have a “Scholarly/Peer-reviewed” option to limit your results so that only peer-reviewed article citations will be retrieved.

2. Look up the journal title in a resource called Ulrich’s Web, an international periodicals directory listed in the Databases A-Z list under U. Ulrich’s uses an icon of a referee’s shirt to
identify whether or not a journal is peer-reviewed. **Be sure to search for the journal title, not the title of the article.** If a journal is peer-reviewed the articles in it are too. However, editorials, commentary, letters to the editor and book reviews are not peer-reviewed even if you find them in a peer-reviewed journal. Newspaper articles can be useful for finding background information during the research process, but they are not peer-reviewed.

Types of scholarly articles

There are many types of scholarly articles. A few are highlighted below.

**Literature Review:** Also called a review article. A literature review gathers and summarizes scholarly literature as it relates to a particular topic. It often contains countering points of view and evaluations of the literature that it includes. It may reveal recurring themes or gaps in the research. (Note that a literature review is not the same thing as a peer-reviewed article. You may see "review" as a publication type search limit in some databases – this means a literature review, not a peer-reviewed article.) Consult this research guide for more on literature reviews and how to write them.

**Empirical Research Articles:** Empirical articles contain original research. You may be able to tell that the article is empirical from the title or abstract, or you may have to scan the article to know if it is empirical. Empirical articles usually include the following components: abstract, introduction, method, results, discussion, references.

**Systematic Review:** A systematic review summarizes and synthesizes large bodies of evidence, while identifying gaps in current research. It uses scientific strategies that limit bias in the selection, critical appraisal and synthesis of all pertinent studies that address a specific clinical question to help provide a reliable basis for decision making. A systematic review may include a meta-analysis. Consult this research guide for more on systematic reviews and how to write them.

**Meta-Analysis:** A research study using statistical analysis and quantitative data from previous research studies.

**Conference Paper:** A paper written for an academic or scientific conference, often peer-reviewed. These papers are usually exploratory attempts to discover the community’s interest in a topic.
Elements of a Citation

For a journal

In this example the article, “Stem cells in myocardial infarction: from bench to bedside” was published in the journal Heart. The lead author was H. Möllmann. It was published in March 2009 in volume 95, issue 6 on page numbers 508-514.

For a book

This book, titled “Physicians Assistants: Their Contribution to Health Care” was published by Springer Publishers in 1982 and was written by H.B. Perry and B. Breitner.

For a chapter in a book

CHAPTER 4: THE WEB VS. THE LIBRARY

“Supposing is good, but finding out is better.”
- Mark Twain

Should you use Google to find the articles you need?

The web is like public access TV. Anyone can create their own programs and there are few production standards. Online databases are like premium cable channels. The library pays a lot for them, access is restricted, and the programming is higher quality.

Although the web contains powerful tools for locating research, Google, and even Google Scholar, are very inefficient ways to look for the kind of articles you’re expected to use for your papers and projects. Researchers may start with the web because it’s the most familiar tool for them but the library is really the best place to start. Save time and energy; stick to using the library website as a "door" to these online databases. Below is a comparison of the features of Google, Google Scholar, and a typical library database:

<table>
<thead>
<tr>
<th>Library Databases</th>
<th>Google Scholar</th>
<th>Google</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Mostly non-scholar</em></td>
<td>Mostly scholarly, but lacks quality control.</td>
<td>Mostly scholarly, but lacks quality control.</td>
</tr>
<tr>
<td><em>Can’t limit by subject or discipline.</em></td>
<td>Can’t limit by subject or discipline.</td>
<td>Can’t limit by subject or discipline.</td>
</tr>
<tr>
<td><em>Can’t add filters or limits.</em></td>
<td>Can’t add filters or limits.</td>
<td>Can’t add filters or limits.</td>
</tr>
<tr>
<td><em>Not clear if you can access full text; may be asked to pay for the article.</em></td>
<td>Not clear if you can access full text; may be asked to pay for the article.</td>
<td>Not clear if you can access full text; may be asked to pay for the article.</td>
</tr>
<tr>
<td><em>“Machine crawled” information from websites that web crawlers are allowed to go.</em></td>
<td>“Machine crawled” information from websites that web crawlers are allowed to go.</td>
<td>“Machine crawled” information from websites that web crawlers are allowed to go.</td>
</tr>
<tr>
<td><em>Includes foreign materials.</em></td>
<td>Includes foreign materials.</td>
<td>Includes foreign materials.</td>
</tr>
<tr>
<td><em>Free. Data comes from open web.</em></td>
<td>Free. Data comes from open web</td>
<td>Free. Data comes from open web</td>
</tr>
<tr>
<td><em>Can easily reach PDFs, full text, or order through interlibrary loan for free.</em></td>
<td>Can easily reach PDFs, full text, or order through interlibrary loan for free.</td>
<td>Can easily reach PDFs, full text, or order through interlibrary loan for free.</td>
</tr>
<tr>
<td><em>Can choose databases with relevant content.</em></td>
<td>Can choose databases with relevant content.</td>
<td>Can choose databases with relevant content.</td>
</tr>
<tr>
<td><em>Can filter and limit results.</em></td>
<td>Can filter and limit results.</td>
<td>Can filter and limit results.</td>
</tr>
<tr>
<td><em>Contains copyrighted, licensed, proprietary data, not available for free on the web (behind a “fee-wall”).</em></td>
<td>Contains copyrighted, licensed, proprietary data, not available for free on the web (behind a “fee-wall”).</td>
<td>Contains copyrighted, licensed, proprietary data, not available for free on the web (behind a “fee-wall”).</td>
</tr>
</tbody>
</table>

If you have not already linked Google Scholar with the GSU library, here’s how. Once Google Scholar opens, click settings and then click library links. Search for the listings shown below. Then click Save.
Once you have set the GSU library in Google Scholar, you can click “more” to access the Find it@GSU option which will search the GSU databases.

Alternatively, search using the Google Scholar link in the Databases A-Z list where our subscriptions are already set up.

**TIPS**

- Don’t ever pay for an article!
- Always log in from the library website to access our subscriptions.
- Use the [**FIND IT@GSU**](#) button to get to full text or PDFs or order through Interlibrary Loan (ILL).
  - ILL is **free**, has a ~24 hour turnaround (usually less than 12), and arrives as a PDF attachment in your GSU student email.
CHAPTER 5: SELECTING THE TYPES OF INFORMATION YOU NEED

Which format to search?

Regardless of your topic, you must search multiple sources of information to make sure you’ve covered the topic thoroughly. The type of information you search will depend on your topic and the structure of the paper you’re writing.

For instance, if you are writing a paper about an event that happened this week, you will not find scholarly articles about that event because it takes much longer than a week for a scholarly article to be written, peer-reviewed and published.

<table>
<thead>
<tr>
<th>Format</th>
<th>Time to publication</th>
<th>Some ways to find that information</th>
<th>Good for…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web</td>
<td>Days/Weeks</td>
<td>Google, Newspaper Source, Factiva, LexisNexis</td>
<td>Very recent news reports (not scholarly)</td>
</tr>
<tr>
<td>Journals</td>
<td>Six months +</td>
<td>Databases; bibliographies; cited references</td>
<td>Research results, review articles</td>
</tr>
<tr>
<td>Books</td>
<td>1+ years</td>
<td>GIL library catalog; bibliographies; GIL universal catalog; Worldcat.org</td>
<td>Background information</td>
</tr>
<tr>
<td>Reference sources</td>
<td>Average 10 years</td>
<td>GIL library catalog; bibliographies</td>
<td>Background information</td>
</tr>
</tbody>
</table>

Different types of publications have different characteristics.

**Primary Literature**: Primary sources means original studies, based on direct observation, use of statistical records, interviews, or experimental methods, of actual practices or the actual impact of practices or policies. They are authored by researchers, contain original research data, and are usually published in a peer-reviewed journal. Primary sources can also be first-hand experiences related through diaries, interviews, autobiographies and creative works. Also called empirical research.

**Secondary Literature**: Secondary sources analyze, synthesize or interpret primary sources. Some examples include textbooks, meta-analyses, systematic reviews, literature reviews, and biographies.
CHAPTER 6: ABOUT DATABASES

Search the appropriate database for your topic. Generally, research in the health sciences will use the databases below.

<table>
<thead>
<tr>
<th>Selected key health science databases</th>
<th>Selected databases for specific populations/interests</th>
<th>Selected general &amp; interdisciplinary databases</th>
</tr>
</thead>
<tbody>
<tr>
<td>• CINAHL (Cumulative Index to Nursing and Allied Health Literature)</td>
<td>• Ageline</td>
<td>• Academic Search Complete</td>
</tr>
<tr>
<td>• Cochrane Library</td>
<td>• Environment Complete</td>
<td>• Business Source Complete</td>
</tr>
<tr>
<td>• MEDLINE (via either PubMed or EBSCO)</td>
<td>• ERIC (Educational Resources Information Center)</td>
<td>• Dissertations &amp; Theses</td>
</tr>
<tr>
<td>• Web of Science</td>
<td>• Global Health</td>
<td>• Factiva</td>
</tr>
<tr>
<td></td>
<td>• Medic Latina</td>
<td>• JSTOR</td>
</tr>
<tr>
<td></td>
<td>• PAIS International (Public Affairs Information Service)</td>
<td>• LexisNexis</td>
</tr>
<tr>
<td></td>
<td>• PsycInfo</td>
<td>• Project MUSE</td>
</tr>
<tr>
<td></td>
<td>• Sociological Collection</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• SPORTDiscus</td>
<td></td>
</tr>
</tbody>
</table>

There are several ways to get an article you have a citation for….

1. If you know the title of the article you can search for it in one of the relevant (health science) databases or the Advanced Discover Search on the library website.
2. If you also know the title of the journal the article is in, you can search for the journal title on the Journals tab of the website and drill down to the article.

Off-Campus Access

If you access the library databases from off-campus, you will be prompted for your Campus ID and password as shown below. Log in using the same ID as you use for Brightspace/D2L and your GSU email.
CHAPTER 7: CORE HEALTH SCIENCE DATABASES

About MEDLINE: MEDLINE is a database from the National Library of Medicine. It contains millions of citations from a variety of fields including clinical medicine, nursing, biology, bioengineering, health care administration, behavioral sciences, veterinary science, chemical sciences and much more. Coverage is worldwide, but most records (about 90%) are from English-language sources or have English abstracts. Note that results saved to the PubMed clipboard stay for only 8 hours. Create an account and log into PubMed’s “My NCBI” to save your results permanently.

The National Library of Medicine provides a free search interface to search MEDLINE, called PubMed (Public MEDLINE). MEDLINE is also available through commercial vendors (such as EBSCO, Ovid, Embase and Web of Science) who have leased the content and provide access through their interface.

Therefore, if you need to search MEDLINE you can choose which interface you prefer; PubMed or EBSCO (the usual alternative to PubMed at GSU). There are “pros and cons” to using either PubMed or EBSCO. With PubMed you are searching only MEDLINE, but you can use medical subject headings (MeSH) to get very precise results. In EBSCO you can combine databases together to make your search coverage more broad, but this disables the use of the subject headings.

About EBSCO databases: EBSCO is the name of a vendor that licenses access to many that the GSU library subscribes to databases (e.g. CINAHL, Ageline, PsycInfo). If you are accessing databases through EBSCO, you will recognize the navigation interface for all EBSCO databases. However, even within EBSCO, each database has its own set of unique features. The most notable difference in features is the advanced options for limiting your search and the subject headings.

IMPORTANT: Note that results saved to any EBSCO database folder will be deleted when you close your browser window. Create a personal account and log into “My EBSCOhost” to save your results permanently or be sure to email them to yourself before closing your browser.

About CINAHL (Cumulative Index to Nursing and Allied Health Literature): CINAHL provides full text for over 700 nursing and allied health journals. There are also Evidence-Based Care Sheets and Quick Lessons which provide concise overviews of diseases and conditions and outline the most effective treatment options.

About Web of Science: Web of Science contains multidisciplinary content in the sciences, social sciences, arts, and humanities, with coverage dating back to 1900, including 160,000 conference proceedings.

See the Quick Guides on the pages that follow for more information on PubMed and EBSCO databases.
PubMed Quick Guide

Although PubMed is free online, you must use the link provided through the library website: (http://research.library.gsu.edu/DB_PUBMED) to be able to view the subscriptions provided by the GSU Library using the Find It button or be taken to the library's free InterLibrary Loan (ILL) service.

PubMed is a free resource developed and maintained by the National Center for Biotechnology Information (NCBI) at the National Library of Medicine (NLM). PubMed gives free access to MEDLINE, NLM's bibliographic database of citations and abstracts in the fields of medicine, nursing, dentistry, veterinary medicine, health care systems, and preclinical sciences. MEDLINE covers approximately 5,400 international biomedical journals with coverage extending back to 1946. MEDLINE contains over 24 million citations. MEDLINE is leased from NLM by vendors such as EBSCO and Ovid.
Advanced Searching Using the Medical Subject Headings (MeSH) Thesaurus

Restricting to "major topic" allows you to limit your search to articles for which the MeSH term is the major focus. In this example, restricting to major topic would stop the search at Esophageal Perforation and NOT include Mallory-Weiss Syndrome.

MeSH is the National Library of Medicine's standardized vocabulary or subject heading list. It's used by subject indexers to reflect the subject content of journal articles. Indexers typically select 10–12 MeSH terms to describe every indexed paper. Using MeSH terms to search instead of keywords often gives better search results. You can also use the pull down menu to access the MeSH Thesaurus.

MeSH headings are organized in a "tree" with 16 main branches. Esophageal Perforation falls under Esophageal Diseases in the MeSH tree. Any lower terms will be more specific.
EBSCOHost Health Science Databases Quick Guide

EBSCO is a major database interface and information provider which provides a number of health sciences databases including the ones listed below.

**CINAHL** (Cumulative Index to Nursing and Allied Health Literature), pronounced "sin-all", is for the nursing and allied health disciplines.

**MEDLINE** is the National Library of Medicine's bibliographic database with information related to the fields of medicine, nursing, the health care system, and preclinical sciences. Another way to search MEDLINE is through the PubMed interface.

**Global Health** indexes journals dedicated to public health, covering international research.

**PsycINFO** is devoted to literature in behavioral science and mental health.

**Biological Abstracts** provides users with the latest information in virtually every life science discipline.

**Academic Search Complete** is a large multi-disciplinary database for general academic searches.

**Searching Multiple EBSCO Databases** - The EBSCO interface can search multiple databases at the same time. Click Choose Databases (1), check off the additional databases you want to add (2) and click OK (3).
**Basic Keyword Searching** - Using keywords is the broadest way of searching and can result in a large number of citations. Enter a keyword or phrase in the search boxes and use the “Select a Field” pull down menu, to choose where the database will look for these words e.g. Title, Abstract, and Subject Heading.

You can refine your results with the limits filters located on the left side of the screen. Adding limits will reduce the number of results. Save to a temporary folder or create a "My EBSCOHost" account to permanently save your results.

Look for the **Find It GSU** icon, a **Find It** icon, or "Linked full text" to access the full article text or be taken to the library’s free interlibrary loan (ILL) service.
The advanced search options in CINAHL
CHAPTER 8: SEARCH STRATEGIES

Finding background information

If you don’t already have a handle on the general background information for your topic, try using a review article, encyclopedia or reference book. The background information will give you an overall sense of your topic and will help you find some direction for building your search.

Try the reference book collection on the second floor of Library North. Some examples:

- **Diagnostic and statistical manual of mental disorders: DSM-5.** Ref.RC455.2.C4 D54 2013
- **A dictionary of epidemiology** Ref. RA651 .D553 2008
- **Dictionary of nursing theory and research** Ref. RT81.5 .P69 2011
- **Encyclopedia of medical anthropology: health and illness in the world's cultures** Ref. RA418 .E354 2004
- **Encyclopedia of plague and pestilence: from ancient times to the present** Ref. RA649 .E53 2008
- **Health care systems around the world: A comparative guide** Ref. RA418 .B67 2013
- **Stedman's medical dictionary for the health professions and nursing** Ref. R121 .S8 2008

Check the library catalog for other titles.

Some databases have excellent background information about general topics. Try these examples:

- **CQ Researcher**
- **Funk and Wagnalls New Encyclopedia**
- **Gale Virtual Reference Library**
- **Issues and Controversies**

Keywords vs. subject headings

**Keywords**

- Keywords are words you think define your topic.
- Some databases not only search by keyword, but “behind the scenes,” they “map” your keyword to a subject heading term (see below) and include that term in the search as well.
- One disadvantage of a keyword search is that it doesn’t take into account the meaning of the words, so if a term has more than one meaning, irrelevant records may be retrieved. With keywords the database won’t know if you mean **tears = laceration** or **tears = fluid from the eyes**.

**Subject headings**

- Professional indexers review each article in a database and add subject headings to the article’s database record to reflect what the article is about.
- Think of subject headings as standardized database terms. They consolidate different words used to describe the same concept (e.g., teen, teens, teenager, adolescence, etc.) into one standardized term (e.g., adolescent). You will often get very different (usually better) search results if you use the terms officially recognized by each database.
- Subject headings may also be called: Descriptors, MeSH terms (Medical Subject Headings), CINAHL headings, index terms, or controlled vocabulary.
- Sometimes there *isn’t* a subject heading term for your topic or the subject heading search is too narrow and has too few results and you must rely on keywords (which is fine). You can
also combine subject headings and keywords.

- Most databases use a controlled vocabulary specific to that database for subject searching. PubMed and MEDLINE’s MeSH (Medical Subject Headings) search retrieves subjects, not words. When you search with a MeSH term, you restrict your search to MEDLINE citations with that subject heading. PubMed automatically includes synonyms and medical subject headings in your search, so a basic PubMed search is usually more comprehensive than the same search in other MEDLINE interfaces.

**Basic search strategies**

It’s usually best to start fairly broad; later, you can add limits or filters, to help narrow the search. Identify your topic, and then break it down into concepts or *keywords*.

It can be helpful to state your topic idea as a question:

```
“What effect does the use of tobacco have on the health of young people?”

**Keywords** = tobacco health youth
```

Doing a search with just those three terms will probably retrieve many results so focus and refine the main concepts or keywords. Looking at the subjects listed in an abstract may give you ideas about synonyms to use.

```
**Refined keywords** = chewing tobacco health outcomes united states

+ Filter = adolescent (13-18 years of age)

= “What effect does use of smokeless tobacco have on the health outcomes of adolescents in the U.S.?”
```

**Refine your search using limits or filters**

Once you have performed an initial search, most databases offer limits or filters to expand your search. Depending on the database, you may be able to limit to publication type, methodology, population type, date, age range, sex or other factors.

**Limits to avoid**

DON’T click off the "Full text" or “full text available” limit. Doing this will exclude articles that you could easily and quickly obtain through Interlibrary Loan. If you exclude them you won’t even know what you didn’t find.

**Advanced search strategies**

Simple searches with two to four keywords may be all that you need for your research. However, you may need to try a more advanced search strategy if you don’t get any results or if you don’t get enough relevant results.

- If you are not getting any results, check your spelling (databases can be persnickety about spelling.)
• Brainstorm synonyms or related terms.
• Try subject searching within the database. You can choose "subject" from the drop down menu beside the advanced search boxes in most databases. Subject searching can focus your search so your results are more relevant.
• Look at the subjects listed in the citations you do retrieve and do another search using those.

Using Wildcards, Truncation and Exact Phrase

Databases also often have features to help you search similar words or phrases. Most databases use the symbol * or # for truncation or wildcard symbols. Use the database’s Help tab to verify the correct symbol. These are the most common methods:

<table>
<thead>
<tr>
<th>Truncation Symbol</th>
<th>Uses root of the word.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: pharm*</td>
<td>Finds pharmacology, pharmacy, pharmaceutical, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wildcard Symbol</th>
<th>Allows for multiple spellings of a word.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: sul*ur</td>
<td>Finds sulphur and sulfur</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exact Phrase</th>
<th>Use quotation marks to search for an exact phrase.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: &quot;persian cat&quot;</td>
<td>Finds information on cats that are the Persian breed, not just cats in relation to anything Persian.</td>
</tr>
</tbody>
</table>

Boolean Searching

“Boolean logic” is a system that allows you to set relationships between keywords or concepts when searching. The most commonly used Boolean commands are AND, OR, and NOT. Using these operators can make your searches more precise and save time.

<table>
<thead>
<tr>
<th>AND NARROWS:</th>
<th>Tells the database that you only want articles that contain ALL of the search terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. coli</td>
<td>hamburger</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OR EXPANDS:</th>
<th>Tells the database that you want all articles that contain EITHER of the terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>kidney</td>
<td>renal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOT EXCLUDES:</th>
<th>Tells the database that you do not want any articles that contain a certain term</th>
</tr>
</thead>
<tbody>
<tr>
<td>lead poisoning</td>
<td>children</td>
</tr>
</tbody>
</table>

22
When you choose the advanced search option, the database helps you build the search string. For example, in EBSCO, the advanced search option defaults to three different fields that you can connect with AND, OR, or NOT as shown below. When using multiple concepts you must use parentheses to join the terms that you want searched together.

![Search string example](image)

**Citation tracking as a search strategy**

Many databases offer a citation tracking feature. You may see terms such as "cited by" or "cited references." Citation tracking is used for various purposes. One purpose is to measure the impact of a journal or an article in the field. If an article is frequently cited by other articles, then it is probably making an impact in the field. Another reason to use citation tracking is to find relevant articles on your topic.

**Tracking back** (“One good resource” system or bibliographic mining): One common method of locating articles about a topic is to find an article that is relevant, then look at the bibliography and find those articles.

**Tracking forward** (cited reference searching): This feature allows you to see articles that cite a particular article. The new articles that you retrieve might have the same "cited by" feature allowing you to follow the research forward in time. The new articles will also have a bibliography that can be tracked backwards in time.

An example of citation tracking in CINAHL:

![Citation tracking example](image)

If you click *Cited References (39)*, a list of 39 records cited in the bibliography of “Decreased Cardiac Output….” will be shown (so you’re tracking backwards).

If you click *Times Cited in this Database (8)*, a list of 8 newer publications that cite “Decreased Cardiac Output….” will be shown. All of the articles will be newer than the Oct-Dec 2010 publication date of the article in question. Thus, you are tracking the research forward.
Note that tracking forward is limited to the database or the vendor’s group of databases that you are searching.

Not all databases offer citation tracking and there is no comprehensive source for citation tracking. Web of Science is a good source for citation tracking, as is Google Scholar. Google Scholar also tracks books. Google Scholar is not perfect as it does not have access to all publication information.

Unfortunately, in EBSCO, some searching features disappear when you are searching multiple databases at once. One such feature is citation tracking. If you want to use citation tracking, search only one database at a time in EBSCO. Not all EBSCO databases offer citation tracking. Also, subject terms for subject searching vary within each database. Search databases individually to take optimal advantage of subject searching.

When using any citation tracking tool, check for author name consistency. The tool might retrieve authors with similar names or omit authors whose names are slightly inconsistent when they publish.
CHAPTER 9: ACCESSING FULL TEXT ARTICLES FROM DATABASES

1. If there is a PDF Full Text link or HTML Full Text Link the article is available online within the database you are using. When there is an option, always select the PDF link because the HTML link is not formatted and does not include page numbers that you might need in your citations.

2. If there is a button click that and a window will open with options for finding the article either from another database location or to find the article in print in the library as shown below.

3. If print or online access is not available, there will be a link in the window to request the article via Interlibrary Loan (ILL) from another library as shown below. ILL is free, usually has a ~24 hour turnaround and arrives as a PDF.
CHAPTER 10: SEARCHING FOR EVIDENCE-BASED PRACTICE ARTICLES

Evidence-based practice (EBP) is the “conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.” That is, it integrates the best external evidence with individual clinical expertise and patients’ choice. Evidence-based practice involves 5 steps:

1. Ask an answerable clinical question based on the health needs of a specific patient (may use the PICO framework: Patient, Intervention, Comparison, Outcome)
2. Find the best available evidence by searching the literature
3. Critically appraise the literature: check for validity, clinical relevance, and applicability
4. Apply the evidence in your clinical practice
5. Evaluate your performance (are you improving outcomes in your patient?)

![Evidence Pyramid Diagram](http://libraryguides.unh.edu/health-literacy)

The EVIDENCE PYRAMID is often used to illustrate the development of evidence. At the base of the pyramid is animal research and laboratory studies - this is where ideas are first developed. As you progress up the pyramid the amount of information available decreases in volume, but increases in relevance to the clinical setting. The BEST evidence will be found by consulting systematic reviews.

Remember that systematic reviews analyze results of multiple clinical studies, often randomized controlled trials. If a database has a filter or limit for EBP use that. If it doesn’t, limit by publication type to look for studies that are representative of the highest level of evidence – randomized controlled trials.

**CINAHL Evidence-Based Practice limiter**

When applied, the Evidence-Based Practice limiter in CINAHL searches the Special Interest field for the value "Evidence-Based Practice." Applying this limiter allows you to limit results to:

- Articles from evidence-based practice journals
- Articles about evidence-based practice
- Research articles (including systematic reviews, clinical trials, meta-analyses, etc.)
- Commentaries on research studies (applying practice to research)

**MEDLINE (via EBSCO)**

The EBM Reviews limiter is a quick method to limit your search to the following publication titles within MEDLINE:

- The Cochrane Database of Systematic Reviews
- ACP Journal Club
- Clinical Evidence
- Evidence-based Mental Health
- Evidence-based Nursing
- Evidence report/Technology assessment
PubMed Clinical Queries

PubMed Clinical Queries search offers three evidence-based search filters.

**Clinical Study Categories:** Can filter by Therapy, Diagnosis, Etiology, Prognosis and Clinical Prediction Guides, as well as scope: Narrow or Broad.

**Systematic Reviews:** Retrieves systematic reviews, meta-analyses, reviews of clinical trials, evidence-based medicine, consensus development conferences, and guidelines. Citations from journals specializing in clinical review studies are also included.

**Medical Genetics:** Filters by Diagnosis, Differential Diagnosis, Clinical Description, Management, Genetic Counseling, Molecular Genetics, and Genetic Testing.

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**Cochrane Library**

The Cochrane Library is a collection of six databases that contain different types of high-quality, independent evidence to inform healthcare decision-making.

- Cochrane Database of Systematic Reviews
- Cochrane Central Register of Controlled Trials
- Cochrane Methodology Register
- Database of Abstracts of Reviews of Effects
- Health Technology Assessment Database
- NHS Economic Evaluation Database

Each Cochrane Review is a peer-reviewed systematic review that has been prepared by a Cochrane Review Group (editorial team) in The Cochrane Collaboration according to the Cochrane Handbook for Systematic Reviews of Interventions or Cochrane Handbook for Diagnostic Test Accuracy Reviews. Existing Reviews are updated as new information becomes available.

See also this detailed research guide on EBM.

CHAPTER 11: HOW TO FIND BOOKS

GIL-Find, the online catalog

GIL-Find

Call Numbers

The GSU library uses the Library of Congress classification system to record the “address” of a book. Here is how to read a book’s call number. Example: *Public Health Ethics and Practice* by Stephen Peckham, RA427.25 .P826 2010

- **RA** = Public Aspects of Medicine
- These are followed by numbers, which refer to the specific subject matter
- **RA 427** = Public Health
- The third line usually represents the author’s last name or the beginning of the title if it is an edited book
- **P826** = Peckham
- The last line is the year of publication
- **2010** = Published in 2010

We have over a million books so write down the entire call number. Books could be located in Library North or South, so also note the building and floor where the book is located.
Loan periods

When you have located the books you need, take them to the User Services desk on Library North, 1st floor to check them out using your PantherCard. Loan periods are:

- Undergraduate students - 4 weeks with 2 renewals
- Graduate students - 1 semester with 2 renewals
- Faculty - 1 calendar year with 2 renewals
- Staff - 4 weeks with 2 renewals

The following library items cannot be taken from the library: reference materials, periodicals, microforms, and Special Collections materials (Archives, Rare Books, etc.).

Textbooks

As a general policy, the university library does not purchase textbooks used in GSU classes. It is impossible for the library to meet student demand for textbooks given our limited financial resources for library materials. For more information read the full policy here. Sometimes a professor may put a copy of your textbook on Reserve. This is usually noted in your syllabus. You can also check the Reserves page.

Recalls

A recall means the library will contact the person who has a book checked out, and ask them to return the book for someone else to use. The person who currently has the book checked out is allowed to have it for 28 days. To recall a book, go into the online item record and click the Recall link.
CHAPTER 12: EVALUATING YOUR RESOURCES

“Be careful about reading health books. You may die of a misprint.”
- Mark Twain

There are many ways to evaluate the information you find.

**Evaluating results for relevancy:** The quick scan

You've used your search terms to retrieve some results in a library database. Now, scan the titles and abstracts to see if they are relevant. If you don't find what you need, or if you've noticed that there are too many unrelated results, you may need to alter your search.

1. Quickly scan your results: The first time through, you likely only need to look at the title and abstract to see if the item is relevant. Put these in the database's temporary holding area, often called a clipboard or folder.
2. Detailed scan: Once you gather what you think might be relevant, scan the items again looking more closely at the introduction, methods, and the conclusion.
3. Read the remaining items more thoroughly and add them to your reference management system (e.g. Zotero or EndNote).

**Evaluation of results for credibility:** The “C.R.A.A.P” test

When evaluating a resource for credibility, consider the following:

- **Currency** - The timeliness of the information.
- **Relevancy** - The importance of the information for your needs.
- **Authority** - The source of the information.
- **Accuracy** - The reliability, truthfulness and correctness of the content.
- **Purpose/Point of View** - The reason the information exists.

**Evaluation using qualitative criteria:** Sometimes, it is more valuable to evaluate a journal in a qualitative way. Check Ulrich's Web for detailed information about the journal that you are considering, including:

- Who publishes the journal?
- How long has the journal been in publication?
- Where is the journal indexed? Do major indexers like MEDLINE list the journal? (This will influence how findable your article is.)

Visit the journal website:

- Does it look professional?
- Is the journal peer-reviewed? If so, is the peer review process explained?
- Is the acceptance rate listed? The smaller the acceptance rate, the more discerning the journal.
- Does it list the members of the editorial board? Do they appear qualified/relevant?
- What authors/institutions are publishing in this journal? Do the articles appear to be professional and well written?

The C.R.A.A.P. test was created by the Meriam Library at California State University, Chico. See also this research guide.
CHAPTER 13: ORGANIZE, CITE, AND SAVE

Stay organized

As you begin your research organize your notes and keep up with where and how you are doing your research. Write down the database or other sources and your search strategy. In the case of literature reviews, systematic reviews and meta-analyses, you may want to create logs to track the information you’re retrieving. Sample logs are available on the Systematic Reviews research guide.

Create a working bibliography. A working bibliography means that you save the citation information for potential sources as you find them. As you go, you will eliminate sources that are less useful and add those that are more useful. You may want to create a folder for the files that you are eliminating just in case you need them later as your paper evolves.

Cite using reference management software (or old school note cards)

The GSU library supports two reference management systems, EndNote and Zotero. These tools allow you to easily collect and store citations, create notes for your citations, insert citations into your paper, insert your bibliography into your paper, share citations with others, and more. Download these tools and find instructions for using them at the following research guides:

**Zotero**  [Zotero](http://zotero.org) (free for anyone)

**EndNote**  [EndNote](http://endnote.com) (free while you are at GSU)

**The 3X5 Notecard Method:** Create source cards with the complete citation for each source. Number these cards, so you can use the number to indicate the source when you begin taking notes. Or, you can include the citation information on each note card containing notes. Use one note/idea per note card. Later, you will organize the cards by concepts to help in the writing process. Paraphrase and use quotation marks when writing down direct quotes.

**Style Guides**

The library offers a research guide, [A Quick Guide for Styles](http://library.gsu.edu/research/bibliography/quick-guide-styles), with information about many common citation styles (e.g. AMA, MLA, APA, Turabian and Chicago). Check this guide for locations of style guides and manuals in the library.

Additionally, [Purdue OWL](http://owl.iupui.edu) (Online Writing Lab) has many helpful resources. [KnightCite](http://knightcite.com) and [Citation Machine](http://citationmachine.com) have online applications that will help you format citations.

**Storing and backing up your information**

Use your [GSU OneDrive Account](http://onedrive.gsu.edu). It's a free online storage space for students with 25GB of cloud storage.

Other methods: Email it to yourself, print it, save it to the cloud, or a flash drive, etc. In fact, choosing more than one method is best. Just be sure to find some reliable way to back it up.
CHAPTER 14: WRITING

Planning your Research

Focus your topic, formulate a research question, and identify the keywords you will use to begin searching for information.

Know your assignment: Know what type of paper you are writing and what requirements need to be met. Different professors may have different requirements even when you are writing the same type of paper.

Develop your thesis: A thesis doesn’t have to be a long final paper in support of an academic degree. A thesis is also just an idea – a main point or argument you make in the paper you’re writing.

For example: How is the health care system influenced by politics?

Choose the words in your question that identify the main concepts. In this question, the keywords are health care AND politics. These are the search terms you will type into a database.

Do a “pre-search”: Test your topic in a database to find out if it is too broad or too narrow. (See the chapter on search strategies for more.)

Refine your topic: If you find too much information, you may need to narrow your topic. Think about specific aspects of your original topic and be more precise. During this process, a topic like: health care AND politics can become: medicare AND partisan politics.

More on exploring a topic from the Purdue OWL (Online Writing Lab).

Before developing your thesis, you will have explored some resources to become familiar with the issues and previous research on your topic. Think about what you have learned during your initial research and begin to ask yourself questions.

• Start with who, what, where, how, and when.
• Think of questions that your paper could support that would be interesting to you and your readers.
• Make sure that you have resources available to you that will support your thesis (e.g. data sets).
• When developing your thesis, think about how long your paper needs to be and whether or not your question can be answered in the required number of pages.

More on developing a thesis from the Dartmouth Institute for Writing and Rhetoric.

Writing Studio at GSU

As a GSU student, you can get personalized help from a writing tutor through the Writing Studio. The Writing Studio is located on the 24th floor of 25 Park Place, Room 2420. Hours vary by semester.

ESL Tutoring Services

The library is home to a service provided by the GSU Intensive English Program for all GSU students whose first language is not English (as well as faculty, visiting scholars and staff).
Services Provided:

- Tutoring for any aspect of English
- Academic writing (appropriate citation style, organization, academic tone and vocabulary vs. informal style and other issues for second-language writers)
- Speaking fluency, conversation and listening skills
- Presentation preparation and practice
- Spelling and vocabulary building
- TOEFL or IELTS preparation

Dates and hours vary by semester; each session is 45 minutes. The tutors are located between Library North and Library South on the 2nd floor bridge, in rooms L201, L202, L203 and L204. To schedule an appointment, register at http://gsu.mywconline.com. Contact Louise Gobron, 404-413-5198, lgobron@gsu.edu for more information.

Books on writing and research methods

Search the library’s online catalog to find books on writing and research.

Also check out this research guide on Writing in the Sciences, as well as the individual research guides for the health sciences.

Find online information here for over 80 writing-related topics by viewing handouts from the Writing Center at the University of North Carolina-Chapel Hill.

Getting oriented to different types of writing

Sometimes it helps to have a good example. For research papers, start by browsing the following journal:

Colonial Academic Alliance Research Journal: The Colonial Academic Alliance Journal publishes undergraduate research. This research is faculty-mentored and undergoes peer-review before being published. View the most popular papers, or enter your search terms for a specific topic.

For Theses and Dissertations, start by browsing the following two collections:

ScholarWorks @ Georgia State University: Learn from those who have gone before you. The theses and dissertations collection in ScholarWorks @ GSU houses the final drafts of theses and dissertations that have made it through the process here at GSU. You can browse by school or search by topic, advisor name or author name.

Dissertations and Theses: The Dissertations and Theses database is a comprehensive database of theses and dissertation from the U.S. and around the world.

Dealing with copyright issues

Copyright is the area of law that deals with creation, ownership, sale, and use of creative and expressive works. Copyright protects works such as poetry, movies, CD-ROMs, video games, videos, plays, paintings, sheet music, recorded music performances, novels, software code, sculptures, photographs, choreography and architectural designs. To qualify for copyright protection, a work must be “fixed in a tangible medium of expression.” This means that the work must exist in some physical form for at least some period of time, no matter how brief.

The concept of “fair use” recognizes that certain uses of copyright-protected works do not require permission from the copyright holder. The Fair Use Clause or Doctrine is probably the most important exemption to copyright protections for educational settings, allowing many uses of copyrighted works for
the purposes of teaching and research. Regardless of whether you feel your research falls under the Fair Use clause, give credit where credit is due:

- Whenever you use quotes.
- Whenever you paraphrase.
- Whenever you use an idea that someone else has already expressed.
- Whenever you make specific reference to the work of another.
- Whenever someone else's work has been critical in developing your own ideas.

Read the University System of Georgia Policy on the Use of Copyrighted Works in Education and Research for more information.

**Finding images for your paper and presentations**

The same copyright issues that pertain to written property must be observed for images. While many databases provide usable images, check the copyright information and/or licensing restrictions carefully before using the images for public consumption. Cite or attribute what you use appropriately.

See the sources below for images related to health and interdisciplinary subjects.

- **Creative Commons**: Search for images that are in the public domain OR have been granted creative commons status.
- The [CINAHL](https://www.cinahl.com) database has an image collection that can be found under the “more” pull-down menu.
- The Advanced Search features of [Google](https://www.google.com), [Flickr](https://www.flickr.com) and [Yahoo](https://www.yahoo.com) image searches have a check-off button allowing you to search for re-usable images.
- [HEAL (Health Education Assets Library)](https://heal.iamse.org): Collection of freely accessible multimedia images from the International Association of Medical Science Educators (IAMSE).
- [NIH Image Bank](https://www.nihimagebank.nih.gov): Contains images from the collections of the 27 Institutes and Centers that comprise the National Institutes of Health.
- [NLM Images from the History of Medicine](https://www.nlm.nih.gov/medhist): Images from the History of Medicine provides access to nearly 70,000 images in the collections of the History of Medicine Division of the U.S National Library of Medicine.
- [Open-i (Open Access Biomedical Images)](https://open-i.nlm.nih.gov): The Open-i project aims to provide next generation information retrieval services for biomedical articles from the full text collections such as PubMed Central.
- [NYPL Digital Gallery](https://digitalcollections.nypl.org): 700,000 digitized images from the New York Public Library.
- [VIA Search | Harvard University](https://via.harvard.edu): A free online image database.
- [Yale Image Finder](https://imagefinder.yale.edu): Search the image content of over 1 million Open Access images and figures from PubMed Central.
CHAPTER 15: LIBRARY SERVICES

The GSU library offers many services to help students obtain the research materials they need.

**Online chat and after-hours answers:** The library website has an online chat screen that will connect you with a librarian to answer library-related questions. After hours, search the chat database for common Q&A’s.

**Interlibrary Loan (ILL):** Request materials (journal articles, books, and more) from other libraries worldwide through the library’s free Interlibrary Loan service. Note that eBooks cannot be “borrowed” from other libraries.

**Borrowing:** Use these online catalogs to find books you need.

- **WorldCat:** Searches the 72,000 libraries worldwide
- **GIL Universal Catalog:** Searches the 35 academic libraries in Georgia
- **GIL:** Searches the GSU Library
- **GIL Express:** Search the Universal Catalog to request books from any University System of Georgia school. The default selection is for these books to be delivered to GSU, but if you live near another USG school, you can have books delivered to that USG school instead.

**Borrowing through ARCHE (Atlanta Regional Council of Higher Education):** GSU users can check out books from ARCHE member institutions and affiliated library members. Get an ARCHE card from the GSU library User Services Desk on Library North 1. Verify the library has what you need before you go.

**Desktop article delivery:** Graduate students and faculty can request electronic versions of articles that are only available in print in the GSU collection. Simply request the item through ILL.

**Your library account:** Create a PIN to access your account to renew materials online, check due dates and get the GALILEO password. Your Library ID has 7 characters starting with either an S, O (oh) or E and is found on your PantherCard.
**Wireless Access:** Wireless access is available throughout the library via GSU’s wireless network, CatChat2x.

**Computing:** The library has over 400 computer workstations, loaded with software for student use. Click this link for details.

**Printing:** The printers accept PantherCards or guest print cards only. A portion of your student technology fee is automatically loaded on your PantherCard each semester for printing (currently $3). Once you have used up that money, you must open a PantherCash account either online or in the PantherCard Office and add funds to your PantherCard to pay for printing. Another option is to purchase a guest print card in the library and add money to that. The guest print card machine is located on Library North, 2nd floor.

Black and white printers are located on Library North 1st, 2nd, 3rd, and 4th floors, and on Library South, 3rd floor. The color printer is on Library North, 2nd floor near the Technology Support Desk. The black and white printers in the library automatically default to duplex (front-and-back) printing. To set up printing go to MobilePrint http://technology.gsu.edu/2013/11/22/mobileprint.

- Duplex printing: Black-and-white duplex prints: $.08  Color duplex prints: $.40
- Single-sided printing (default on color printer): Black-and-white prints: $.05 per page  Color prints: $.25 per page

**Scanners:** There are 16 scanners available on Library North 2 near the Technology Support Desk.

**Fax machines:** The library does not have a fax machine. Try the Student Government office in the University Center (free for local/toll-free) or the Copy Corner in Kell Hall.

**Photocopying:** There are copy machines on Library North 1st and 2nd floors. Copies are $.10 per page or $.08 per page when paying with PantherCash. The machines do not accept credit/debit cards or cash. The library does not have a color copier.

**Group study rooms:** The library has 60 study rooms for students to study in small groups. Rooms can be reserved in 30 minute increments for a maximum 3 hours per day per CampusID. Reserve a room here.

The library also has a Presentation Practice Room with a lectern, projector, and projection screen; to practice giving a presentation. Group Media Viewing Rooms have a flat-panel TV, VCR, DVD player, surround sound system, computer, and computer speakers.

**CURVE (Collaborative University Research & Visualization Environment):** CURVE is a technology-rich discovery space supporting the research and digital scholarship of GSU students, faculty, and staff. CURVE has 7 collaborative workstations, a large interactive vizwall, and has high-powered PCs and Mac Pros to allow users to work with and manipulate large images and datasets. CURVE is located on Library South, 2nd floor.
GSU Guidelines for Academic Honesty

**Academic Honesty is...**
- Acknowledging the use of another person’s work when writing papers or completing projects.
- Not giving or receiving unauthorized help on an examination.
- Completing assignments without falsification of results or resources.
- Completing each assignment without copying or submitting work used in other classes.

**Actions Unacceptable at GSU**

**Plagiarism**
- Presenting another person’s work as your own and not acknowledging in the text, footnotes or bibliography when another person’s words or work is paraphrased or quoted.
- Submitting research, papers, or projects created by someone else as your own work.
- Not acknowledging the use of research sources gathered by someone else when that use is forbidden by the researcher or faculty member.

**Falsification**
- Using data or information that you make up.
- Citing sources not used.
- Falsifying the results of polls or experiments.

**Cheating on Examinations**
- Using notes or texts not authorized by the instructor to complete an examination.
- Allowing another student to copy your work.

**Unauthorized Collaboration**
- Submitting work created with a substantial amount of assistance or collaboration that was not authorized by the instructor.

**Multiple Submissions**
- Turning in a paper or project that was created for another class.
- Using part of a paper created for another class without proper citation or acknowledgement.

**How to Avoid Plagiarism/Academic Dishonesty**
- Record the references for each source used. Write down, make a computer file, or print full citation information for the articles, books, or websites that you consult. Cite your sources.
- Paraphrase or summarize other people’s thoughts and attribute the content to them.
- Use direct quotations and attribute them properly.
- Start working on your paper early and give yourself plenty of time to do your research.

**Penalties**
- Academic or disciplinary penalties such as failing a course, suspension, or expulsion may be imposed.

**How the Library Can Help**
- Use the Library databases and books to research your topic, and then write down your own ideas to create your paper.
- Librarians can teach you how to use reference management systems like Zotero or EndNote to keep track of your references and research sources. Refer to the Research Guides [http://research.library.gsu.edu/zotero](http://research.library.gsu.edu/zotero) and [http://research.library.gsu.edu/endnote](http://research.library.gsu.edu/endnote) for more information.
- Consult the Citation Style Guides available at the Library for multiple styles, e.g. APA, MLA, JAMA, etc. and [http://research.library.gsu.edu/citationstyles](http://research.library.gsu.edu/citationstyles).
- Refer to the Research Guide on Academic Honesty [http://research.library.gsu.edu/gsuacademichonesty](http://research.library.gsu.edu/gsuacademichonesty) for more information.

More information about plagiarism and academic honesty is available in the [GSU Code of Conduct](http://research.library.gsu.edu/gsuacademichonesty).

Find out more about plagiarism:

- [What is Plagiarism](http://research.library.gsu.edu/gsuacademichonesty) website
- Harvard Graduate School of Education’s tutorial: "Principles of Paraphrasing"
Glossary of Library and Research Terms

Abstract: A brief, objective representation of the essential content of a book, article, speech, report, dissertation, patent, standard, or other work, presenting the main points in the same order as the original but having no independent literary value.

Annotated bibliography: A bibliography is a list of sources (books, journals, websites, periodicals, etc.) one has used for researching a topic. An annotated bibliography includes a summary and an evaluation of each of the sources.

Automatic term mapping: The process used by PubMed to find a match to untagged search terms that are entered into the query box. Terms are matched against subjects using the MeSH (Medical Subject Headings) translation table, journals using the Journals translation table, and authors and investigators.

Bibliographic citations: See citations.

Bibliographic database: A computer file consisting of electronic entries called records, each containing a uniform description of a specific document or bibliographic item, usually retrievable by author, title, subject heading (descriptor), or keyword(s). Some bibliographic databases are general in scope and coverage; others provide access to the literature of a specific discipline or group of disciplines.

Bibliography: A bibliography is a list of sources (books, journals, websites, periodicals, etc.) one has used for researching a topic.

Boolean: A system of logic developed by the English mathematician George Boole (1815-64) that allows the user to combine words or phrases representing significant concepts when searching an online catalog or bibliographic database by keywords. Three logical commands (sometimes called "operators") are available in most search software: AND, OR, NOT.

Call number: Assigned by a cataloger, the call number is a unique code displayed in the item record that represents the item in the library catalog, identifies the specific copy of the work and gives its relative location on the shelf.

Check out or charge: To borrow books or periodicals from the library for a certain period of time.

Circulate: To allow materials to be charged.

Circulation: The process of checking books and other materials in and out of a library. Also refers to the total number of items checked out by library borrowers over a designated period of time and to the number of times a given item is checked out during a fixed period of time.

Circulation desk: Also known at GSU as the User Services Desk. Location in a library where you check out, return or renew items, ask about missing items, or inquire about fines.

Citation: In library usage, a written reference to a specific work or portion of a work (book, article, dissertation, report, musical composition, etc.) produced by a particular author, editor, composer, etc., clearly identifying the document in which the work is to be found. The frequency with which a work is cited is sometimes considered a measure of its importance in the literature of the field. Citation format varies from one field of study to another but includes at a minimum author, title, and publication date.

Controlled vocabulary: The standardization of words which may be used to search an index, abstract or information database.
**Database:** A large, regularly updated file of digitized information (bibliographic records, abstracts, full-text documents, images, etc.) related to a specific subject or field, consisting of records of uniform format organized for ease and speed of search and retrieval. Content is created by the database producer (for example, the American Psychological Association), which usually publishes a print version (Psychological Abstracts) and leases the content to one or more database vendors (EBSCO, etc.) that provide electronic access to the data after it has been converted to machine-readable form (PsycINFO), usually on CD-ROM or online via the web, using proprietary search software.

**Dissertation:** A lengthy, formal written treatise or thesis, especially an account of scholarly investigation or original research on a specialized topic, submitted to a university in partial fulfillment of the requirements for a Ph.D. degree.

**Empirical research:** The study, based on direct observation, use of statistical records, interviews, or experimental methods, of actual practices or the actual impact of practices or policies.

**Evidence-based practice:** A way of providing health care that is guided by a thoughtful integration of the best available scientific knowledge with clinical expertise. This approach allows the practitioner to critically assess research data, clinical guidelines, and other information resources in order to correctly identify the clinical problem, apply the most high-quality intervention, and re-evaluate the outcome for future improvement.

**Filters**: Also known as limits. Parameters (publication date, publication type, language, etc.) used to narrow a database search.

**GALILEO** (GeorgiA LIbrary LEarning Online): GALILEO provides access to hundreds of databases, but it’s not necessary to go to a database through the GALILEO interface. Any database can be reached through the Databases A-Z link on the library homepage. If you access the databases via the GALILEO interface from off-campus, you will be prompted for the GALILEO password. You can get the GALILEO password by logging into the D2L Brightspace course management system or your library account.

**Grey literature:** Literature that is not formally published in sources such as books or journal articles. It may be described as ephemeral, invisible, informal, underground, etc., that is, literature that may be unevaluated, not peer-reviewed. Grey Literature exists in many formats: reports—including preprints; preliminary progress and advanced reports; institutional, internal, technical, and statistical reports; research memoranda; state-of-the-art reports; market research reports; reports of commissions and study groups; as well as, theses, conference proceedings, technical specifications and standards, translations (not distributed commercially), bibliographies, technical and commercial documentation, and official documents (issued in limited numbers).

**Informatics:** The field of information science concerned with the analysis and dissemination of data through the application of computers.

**Interlibrary loan** (ILL): Exchange of books or periodical articles between libraries for a brief period.

**Journal:** A type of periodical which contains scholarly articles. Journals are usually published by academic or association presses and include bibliographies.

**Keyword:** A significant word or words that can be used as a search term to retrieve all the records containing it.

**Limits:** Also known as filters. Parameters (publication date, publication type, language, etc.) used to narrow a database search.
**MeSH (Medical Subject Headings):** MeSH is the National Library of Medicine’s controlled vocabulary system used for indexing journal articles for MEDLINE and is also used for cataloging books and audiovisuals.

**MeSH tree structure:** Refers to the organization of the MeSH vocabulary. MeSH Headings are organized with 16 main branches with narrower (more specific) terms organized in a hierarchical fashion below the branches. In the example below, Anatomy is the one of the 16 branches and the terms under it get more specific as they narrow.

![MeSH Tree Diagram]

**Microform:** Formats for storing photographically reduced images onto plastic film. Microfiche and microfilm are two types of microforms. A microform reader/printer is required to read or copy microforms.

**Mixed methods:** Research that employs both quantitative and qualitative designs.

**Monograph:** A book. A separate treatise on a single subject or class of subjects, or on one person, usually detailed in treatment but not extensive in scope and often containing bibliographies.

**Open access:** Information content made freely and universally available via the web in easy to read format, usually because the publisher maintains online archives to which access is free or has deposited the information in a widely known open access repository. Open access is a new model of scholarly publishing developed to free researchers and libraries from the limitations imposed by excessive subscription price increases for peer-reviewed journals, particularly in the sciences and medicine. By breaking the monopoly of publishers over the distribution of scientific research, open access makes access to scientific information more equitable and has the added advantage of allowing the author to retain copyright.

**Qualitative research:** Emphasis is on conducting studies in natural settings using mostly verbal descriptions, resulting in stories and case studies rather than statistical reports. Qualitative data can be gathered with interviews, observations, and other types of interactions. Qualitative data can be coded and then expressed as quantitative data.

**Quantitative research:** Involves the use of numerical calculations to summarize, describe and explore relationships among traits; reliance on control of variables, statistics, measurement, and experiments.

**Reference desk:** Location in a library where you can get help in using the library and receive answers to your questions. When a person has a question about how to find specific information or how to use library services and resources, assistance can be obtained by contacting the public service point, usually located near the library’s reference collection, in person, by telephone, or in some libraries via e-mail. The GSU library’s reference desk is on Library North, 1st floor.

**References:** Something (a sign or indication) that refers a reader or consulter to another source of information (e.g. a book or passage.) Sometimes used synonymously with the word citation.

**Research guide:** An online guide prepared by a GSU librarian with links to subject-specific resources.
• Clinical Health Informatics
• Nursing
• Nutrition
• Physical Therapy
• Public Health
• Respiratory Therapy

Reserves: Materials that instructors set aside for the students in a class to read. These items may be borrowed for a short period and have very high fines for late returns.

Review article: A comprehensive survey of the works published in a particular field of study or line of research, usually over a specific period of time, in the form of an in-depth, critical bibliographic essay or annotated list in which attention is drawn to the most significant works.

Style manual: A publication that sets forth the rules for composition, including format and manner of citing sources, to be used in a particular discipline or profession, or by a particular publisher.

Systematic review: A literature review focused on a specific research question, which uses explicit methods to minimize bias in the identification, appraisal, selection, and synthesis of all the high-quality evidence pertinent to the question. Systematic reviews of randomized controlled trials are so important to evidence-based medicine that an understanding of them is mandatory for professionals involved in biomedical research and health care delivery. Although many biomedical and healthcare journals publish systematic reviews, one of the best-known sources is The Cochrane Collaboration, a group of over 15,000 volunteer specialists who systematically review randomized trials of the effects of treatments and other research.

Thesis: A proposition advanced and defended in a formal disputation, especially by a candidate in partial fulfillment of university requirements for a Master’s degree.

Source: Online Dictionary for Library and Information Science
Additional Advanced Search Techniques

**Proximity operators:** Proximity (or adjacency) operators allow you to search by phrase or with two or more words in relation to one another. Use the database's Help tab for to verify what symbol to use.

| Near (n): if it does not matter which word appears first. | Example: Prozac n3 adverse effects
Finds Prozac within three words of adverse effects |
|--------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| With (w): if your terms must be in the same order in which they are entered. | Example: physical w1 therapy
Finds records where the word physical is listed first, followed by the word therapy, and where no more than one word separates the two terms. |
| **Stop words:** Stop words are very common words that are automatically ignored by most databases. | Examples: and, if, or, the, a, for, to, an, as, by. Use quotation marks if you need to search for a term that has a stop word in it, such as "Out of Africa" or "The Who." |

**PubMed Search Field Descriptions and Tags**

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<th>Field Searched</th>
<th>Example</th>
</tr>
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<td>Title [TI]</td>
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</tr>
<tr>
<td>Title/Abstract [TIAB]</td>
<td>arterial occlusion [TIAB]</td>
</tr>
</tbody>
</table>

**Domain Name Searching**

When searching the web it may be helpful to limit your results to a specific domain. The domain of a website indicates the type of organization or geographic region from which the site originates. Domain limiters include:

- .edu education
- .gov government
- .mil U.S. military
- .org organization
- .com commercial
- .net open; anyone can use

See the image below for an example of how to phrase your search.

![Google search example](image-url)
Types of Study Designs

**Meta-Analysis**: A way of combining data from many different research studies. A meta-analysis is a statistical process that combines the findings from individual studies. **Example**: Anxiety outcomes after physical activity interventions: meta-analysis findings. Conn V. Nurs Res. 2010 May-Jun;59(3):224-31.

**Systematic Review**: A summary of the clinical literature. A systematic review is a critical assessment and evaluation of all research studies that address a particular clinical issue. The researchers use an organized method of locating, assembling, and evaluating a body of literature on a particular topic using a set of specific criteria. The systematic review may also include a meta-analysis. **Example**: Complementary and alternative medicine use among women with breast cancer: a systematic review. Wanchai A, Armer JM, Stewart BR. Clin J Oncol Nurs. 2010 Aug;14(4):E45-55.

**Randomized Controlled Trial**: A controlled clinical trial that randomly (by chance) assigns participants to two or more groups. There are various methods to randomize study participants to their groups. **Example**: Meditation or exercise for preventing acute respiratory infection: a randomized controlled trial. Barrett B, et al. Ann Fam Med. 2012 Jul-Aug;10(4):337-46.

**Cohort Study (Prospective Observational Study)**: A clinical research study in which people who presently have a certain condition or receive a particular treatment are followed over time and compared with another group of people who are not affected by the condition. **Example**: Smokeless tobacco cessation in South Asian communities: a multi-centre prospective cohort study. Croucher R, et al. Addiction. 2012 Dec;107 Suppl 2:45-52.

**Case-Control Study**: Case-control studies begin with the outcomes and do not follow people over time. Researchers choose people with a particular result (the cases) and interview the groups or check their records to ascertain what different experiences they had. They compare the odds of having an experience with the outcome to the odds of having an experience without the outcome. **Example**: Non-use of bicycle helmets and risk of fatal head injury: a proportional mortality, case-control study. Persaud N, et al. CMAJ. 2012 Nov 20;184(17):E921-3.


**Test-Tube Lab Research**: "Test tube" experiments conducted in a controlled laboratory setting.

Study Design Terminology

**Absolute risk reduction (ARR):** The difference between the control group’s event rate and the experimental group’s event rate.

**Bias:** Any deviation of results or inferences from the truth, or processes leading to such deviation. Bias can result from several sources: one-sided or systematic variations in measurement from the true value (systematic error); flaws in study design; deviation of inferences, interpretations, or analyses based on flawed data or data collection; etc. There is no sense of prejudice or subjectivity implied in the assessment of bias under these conditions.

**Case control studies:** Studies which start with the identification of persons with a disease of interest and a control group (comparison, referent) without the disease. The relationship of an attribute to the disease is examined by comparing diseased and non-diseased persons with regard to the frequency or levels of the attribute in each group.

**Causality:** The relating of causes to the effects they produce. Causes are termed necessary when they must always precede an effect and sufficient when they initiate or produce an effect. Any of several factors may be associated with the potential disease causation or outcome, including predisposing factors, enabling factors, precipitating factors, reinforcing factors, and risk factors.

**Control groups:** Groups that serve as a standard for comparison in experimental studies. They are similar in relevant characteristics to the experimental group but do not receive the experimental intervention.

**Controlled clinical trials:** Clinical trials involving one or more test treatments, at least one control treatment, specified outcome measures for evaluating the studied intervention, and a bias-free method for assigning patients to the test treatment. The treatment may be drugs, devices, or procedures studied for diagnostic, therapeutic, or prophylactic effectiveness. Control measures include placebos, active medicines, no-treatment, dosage forms and regimens, historical comparisons, etc. When randomization using mathematical techniques, such as the use of a random numbers table, is employed to assign patients to test or control treatments, the trials are characterized as Randomized Controlled Trials.

**Cost-benefit analysis:** A method of comparing the cost of a program with its expected benefits in dollars (or other currency). The benefit-to-cost ratio is a measure of total return expected per unit of money spent. This analysis generally excludes consideration of factors that are not measured ultimately in economic terms. Cost effectiveness compares alternative ways to achieve a specific set of results.

**Cross-over studies:** Studies comparing two or more treatments or interventions in which the subjects or patients, upon completion of the course of one treatment, are switched to another. In the case of two treatments, A and B, half the subjects are randomly allocated to receive these in the order A, B and half to receive them in the order B, A. A criticism of this design is that effects of the first treatment may carry over into the period when the second is given.

**Cross-sectional studies:** Studies in which the presence or absence of disease or other health-related variables are determined in each member of the study population or in a representative sample at one particular time. This contrasts with longitudinal studies which are followed over a period of time.

**Double-blind method:** A method of studying a drug or procedure in which both the subjects and investigators are kept unaware of who is actually getting which specific treatment.
**Empirical research:** The study, based on direct observation, use of statistical records, interviews, or experimental methods, of actual practices or the actual impact of practices or policies.

**Evaluation studies:** Works consisting of studies determining the effectiveness or utility of processes, personnel, and equipment.

**Genome-wide association study:** An analysis comparing the allele frequencies of all available (or a whole genome representative set of) polymorphic markers in unrelated patients with a specific symptom or disease condition, and those of healthy controls to identify markers associated with a specific disease or condition.

**Intention to treat analysis:** Strategy for the analysis of a randomized controlled trial that compares patients in the groups to which they were originally randomly assigned.

**Logistic models:** Statistical models which describe the relationship between a qualitative dependent variable (that is, one which can take only certain discrete values, such as the presence or absence of a disease) and an independent variable. A common application is in epidemiology for estimating an individual's risk (probability of a disease) as a function of a given risk factor.

**Longitudinal studies:** Studies in which variables relating to an individual or group of individuals are assessed over a period of time.

**Lost to follow-up:** Study subjects in cohort studies whose outcomes are unknown (e.g., because they could not or did not wish to attend follow-up visits.)

**Matched-pair analysis:** A type of analysis in which subjects in a study group and a comparison group are made comparable with respect to extraneous factors by individually pairing study subjects with the comparison group subjects (e.g., age-matched controls).

**Meta-analysis:** Works consisting of studies using a quantitative method of combining the results of independent studies (usually drawn from the published literature) and synthesizing summaries and conclusions which may be used to evaluate therapeutic effectiveness, plan new studies, etc. It is often an overview of clinical trials. It is usually called a meta-analysis by the author or sponsoring body and should be differentiated from reviews of literature.

**Numbers needed to treat:** Number of patients who need to be treated in order to prevent one additional bad outcome. It is the inverse of Absolute Risk Reduction.

**Odds ratio:** The ratio of two odds. The exposure-odds ratio for case control data is the ratio of the odds in favor of exposure among cases to the odds in favor of exposure among noncases. The disease-odds ratio for a cohort or cross section is the ratio of the odds in favor of disease among the exposed to the odds in favor of disease among the unexposed. The prevalence-odds ratio refers to an odds ratio derived cross-sectionally from studies of prevalent cases.

**Patient selection:** Criteria and standards used for the determination of the appropriateness of the inclusion of patients with specific conditions in proposed treatment plans and the criteria used for the inclusion of subjects in various clinical trials and other research protocols.

**Predictive value of tests:** In screening and diagnostic tests, the probability that a person with a positive test is a true positive (i.e., has the disease), is referred to as the predictive value of a positive test; whereas, the predictive value of a negative test is the probability that the person with a negative test (i.e. does not have the disease.) Predictive value is related to the sensitivity and specificity of the test.
**Prospective studies:** Observation of a population for a sufficient number of persons over a sufficient number of years to generate incidence or mortality rates subsequent to the selection of the study group.

**Qualitative studies:** Research that derives data from observation, interviews, or verbal interactions and focuses on the meanings and interpretations of the participants.

**Quantitative studies:** Quantitative research uses numerical analysis.

**Random allocation:** A process involving chance used in therapeutic trials or other research endeavor for allocating experimental subjects, human or animal, between treatment and control groups, or among treatment groups. It may also apply to experiments on inanimate objects.

**Randomized controlled trial:** Clinical trials that involve at least one test treatment and one control treatment, concurrent enrollment and follow-up of the test- and control-treated groups, and in which the treatments to be administered are selected by a random process, such as the use of a random-numbers table.

**Relative risk reduction (RRR):** The percent reduction in events in the treated group compared to the control group event rate.

**Reproducibility of results:** The statistical reproducibility of measurements (often in a clinical context), including the testing of instrumentation or techniques to obtain reproducible results. The concept includes reproducibility of physiological measurements, which may be used to develop rules to assess probability or prognosis, or response to a stimulus; reproducibility of occurrence of a condition; and reproducibility of experimental results.

**Research design:** A plan for collecting and utilizing data so that desired information can be obtained with sufficient precision or so that an hypothesis can be tested properly.

**Retrospective studies:** Studies used to test etiologic hypotheses in which inferences about an exposure to putative causal factors are derived from data relating to characteristics of persons under study or to events or experiences in their past. The essential feature is that some of the persons under study have the disease or outcome of interest and their characteristics are compared with those of unaffected persons.

**Sample size:** The number of units (persons, animals, patients, specified circumstances, etc.) in a population to be studied. The sample size should be big enough to have a high likelihood of detecting a true difference between two groups.

**Sensitivity and specificity:** Binary classification measures to assess test results. Sensitivity or recall rate is the proportion of true positives. Specificity is the probability of correctly determining the absence of a condition.

**Single-blind method:** A method in which either the observer(s) or the subject(s) is kept ignorant of the group to which the subjects are assigned.

**Time factors:** Elements of limited time intervals, contributing to particular results or situations.

Source: [NLM MeSH Database](https://www.nlm.nih.gov/mesh)