Expanding Knowledge:
Introduction to Health Sciences Librarianship

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Today’s agenda

Questions we plan to answer in this webinar:

● What do we mean by “health sciences?”
● Who are our patrons?
● What do they need?
● What resources can we use to help them?
● What are some useful search tips?
● How do we approach collection development?
● What BLC resources are available?
● What are some professional development opportunities?
What Do We Mean by Health Sciences?
Health Sciences Defined

A broad group of disciplines that applies the sciences and technology to health care (of humans and non-human animals). Health care encompasses preservation of health, study of disease, and the healthcare industry. The health sciences should not be perceived as being purely biomedical sciences, as other sciences such as psychosocial, behavioral, and organizational sciences are important to the health sciences.\textsuperscript{1-2}

All cartoon characters are Bitmoji
Unfamiliar Topics ≠ Unfamiliar Strategies

- No need to fear health sciences questions or patrons
- You already know how to get started
- Importance of the reference interview
- Resist imposter syndrome
An Introduction to Health Sciences Patrons & Their Research Needs
Health Sciences Patrons

Common Programs:
- Biomedical Sciences
- Dentistry
- Graduate Medical Sciences
- Medicine
- Nursing
- Nutrition
- Physician Assistant
- Public Health
- Veterinary Medicine

Roles:
- Undergraduate
- Graduate
  - Preclinical and clinical
- Postgraduate
  - Residency
- Faculty
- Administration
- Health professionals

Other considerations:
- Often working in high-stress clinical environment
- Programs year-round
- Highly collaborative yet simultaneously can be competitive
- Often on a satellite campus
Research Needs: Evidence-Based Practice (EBP)

Most branches of the Health Sciences teach Evidence-Based Practice (EBP). Many of the research questions you receive from Health Sciences patrons are connected to EBP.

The goal of EBP is to provide patient-oriented care while taking into account current research and the clinician’s expertise. It’s helpful to imagine each of these aspects as a leg of a stool that together provide EBP.

![Diagram of a stool with three legs: Scientific evidence, Clinician’s expertise, Patient needs and preferences.]

Research is one leg of the stool - it’s how patrons find the scientific evidence. We seek to streamline the process by teaching patrons what type of question they have, how best to ask it, and where to find the most reliable answers to their question as quickly as possible, due to the fast-paced nature of the health sciences.
Research Needs: Evidence-Based Practice (EBP)

In EBP, first identify if a question is seeking **background information** or **foreground information**.

**Background information:**
- General established knowledge
- Informational in nature
- Who, what, where, when, why
- Usually find answers in textbooks

**Foreground information:**
- Specific knowledge
- Applied in clinical decision making
- Asked in PICO format
- Usually find answer in point-of-care tools or databases (based on guidelines and studies)
- Uses some form of the Evidence Pyramid

“Evidence Pyramid” by Tufts University can be reused under the CC BY-NC-SA license
Other Research Needs

- **Consumer health information**
  - Written at patient level either for themselves or to give to patients

- **Scholarly research**
  - The literature review that is paired with scientific research of all types (bench, qualitative, etc...)
  - Systematic reviews and scoping reviews
  - Grants
    - The NIH mandate
Examples of Real Questions

● For pregnant women with a history of depression, does continuing SSRI treatment or discontinuing SSRI treatment during pregnancy increase their chance of developing postpartum depression?
● How do I use EndNote to format my citations for an NIH grant?
● I’m looking to do a bench study on this new material type for crowns, how do I check the literature to see what studies already exist on it?
● I’m researching the nursing role in relation to “do not resuscitate” orders.
● I need a systematic review on prophylactic antibiotics.
● I need to find a tool to use about stigma and perceptions of complementary and alternative medicine and homeopathy.
● What are nursing students’ knowledge levels regarding abusive head trauma?
● What is the effectiveness of diet versus pharmaceutical treatment for GERD?
Resources for Health Sciences Questions
Print vs. Electronic

- Most resources for health sciences research will be online
- Health science libraries may not be purchasing many print resources
- Some users may prefer print resources for things like:
  - Textbooks
  - Study guides
Commonly Used Databases

- PubMed (includes Medline) - biomedical literature, thorough coverage of English language publications
- EMBASE - European medical literature and pharmacology
- CINAHL - nursing & allied health
- PsycINFO - psychology, psychiatry, psychiatric nursing
- Scopus - sciences, social sciences, technology, patents, cited reference searching
- Web of Science - sciences and social sciences broadly, cited reference searching
- Google Scholar - interdisciplinary, great for terminology, cited reference searching
- Google Patents - international patents
- Health & Psychosocial Instruments - instruments for research studies

Lots of health science literature is outside the English language press, not translated
Free Consumer Health Resources

- Centers for Disease Control & Prevention
- Eat Right (Academy of Nutrition & Dietetics)
- FamilyDoctor.org (American Academy of Family Physicians)
- HealthFinder.gov (US Department of Health & Human Services)
- Mayo Clinic
- MedlinePlus (National Library of Medicine)
- Mouth Healthy (American Dental Association)
Drug Information

Paid Resources

- AHFS Drug Information = “The Red Book”
  - THE drug book
  - Has pricing information as well
- Lexicomp
  - Dental drug information
- Merck Index
  - Provided by the Royal Society of Chemistry

Free Resources

- Provided by National Library of Medicine (free):
  - Dietary Supplement Label Database (DSLD)
  - Drug Information Portal
  - Pillbox
- Drugs.com (free via licensing agreement with Cerner Multum, Micromedex and Wolters Kluwer Health)
- Provided by the FDA:
  - DailyMed
  - Drugs@FDA
Evidence-Based Practice

Background Questions

- Ebook suites
  - AccessMedicine
  - ClinicalKey
  - Stat!Ref
- Drug Information Resources
- Lab Tests
  - Guide to Laboratory and Diagnostic Tests (book)
  - Lab Tests Online (website, free)

Foreground Questions

- Point-of-Care Tools:
  - BMJ Best Practice
  - Dynamed Plus
- Databases
  - Cochrane Library
  - PubMed (free)
- Practice Guidelines
  - Dynamed Plus
  - PubMed - use guideline filter (free)
Agencies and Organizations

Agencies and organizations contain useful information such as:

- Vital and health statistics
- Current best practice guidelines
- Definitions of words and descriptions of highly specialized procedures particular to a specialty
- Lists of resources for further reading

Craft a web search with important keywords and then limit to .org or .gov.
Agencies & Organizations: National & International

Examples of trustworthy organizations (not an exhaustive list)

- AHRQ
- CDC
- Kaiser Family Foundation
- National Cancer Institute
- National Center for Health Statistics
- OECD
- WHO
- World Bank

Also consider national professional health sciences organizations (such as the American Academy of Orthopedic Surgeons).
Agencies and Organizations: State & Local

- Your local public library
  - Example: Boston Public Library eCard - for residents and employees in Massachusetts
- State or local chapters of national professional organizations
  - Example: Massachusetts Dental Society
- State agencies
  - Commonwealth of Massachusetts Department of Public Health
  - State of Rhode Island Department of Health
  - Connecticut State Department of Public Health
  - New Hampshire Department of Health & Human Services, Division of Public Health Services
- Web search the name of the state that interests you plus the word health and limit to .gov to find public health agencies in your area
Health Sciences Searches & Collection Development
Health Sciences Searches - Tips

- Not familiar with a term?
  - Ask patron to explain it to you
  - Look it up on MedlinePlus
  - Look it up in MeSH on PubMed
- Help patron make a list of all synonyms (including acronyms), health sciences language isn’t as consistent as you might think
- Proximity operators and quotation marks are your friends for a lot of medical terminology
- Still coming up dry? Get the patron to find one or two articles they like and use those to find more: title words, indexing terms, citations, cited by, etc...
- Don’t forget the power of the point-of-care tool
Collection Development

● Important Considerations:
  ○ Recency → older than 10 years is outdated
  ○ Boards and licensure exams
  ○ Impact factor
  ○ Deans’ positions on editorial boards
  ○ Beware vanity presses

● Tips:
  ○ You can get by without Ovid - MEDLINE is on PubMed and other databases
  ○ If systematic reviews are increasingly being conducted at your institution you will need EMBASE
  ○ Look to professional (both library and health sciences) organizations for lists of key readings

● Nontraditional Purchases:
  ○ Modern popular science nonfiction books.
  ○ Anatomical models
  ○ Tech such as computer chargers and scientific calculators
  ○ Graphic Medicine
BLC Resources

- BLC Health Sciences Community of Interest
- Access to other BLC Libraries via consortium card -- call ahead about access, including to online resources

- Boston College
- Boston University
- Brandeis University
- Marine Biological Laboratory and Woods Hole Oceanographic Institution
- Massachusetts Institute of Technology (leaving in June)
- Northeastern University
- State Library of Massachusetts
- Tufts University
- University of Connecticut

- University of Massachusetts Amherst
- University of Massachusetts Boston
- University of Massachusetts Dartmouth
- University of Massachusetts Lowell
- University of Massachusetts Medical School (affiliate member)
- University of New Hampshire
- University of Rhode Island
- Wellesley College
- Williams College
Professional Development
Library Organizations

- **Medical Library Association**
  - Lots of sections and communities of interest to join
  - Consider joining regional or local chapters independently
    - North Atlantic Health Sciences Libraries, Inc. (NAHSL)
    - State chapters include Connecticut, Massachusetts, and Rhode Island

- **National Network of Libraries of Medicine (NNLM) New England Region**
  - Free online and in-person training on many topics

- **Twitter**
  - #medlibs
  - Search the hashtag for tweets from medical librarians
  - Consider joining the #medlibs recurring synchronous twitter chat
Courses

There are many options out there. These are courses and course providers we have found particularly useful:

Online

- Coursera - especially for study design and data management (free)
- Evidence-Based Medicine for the Medical Librarian: https://sils.unc.edu/programs/ebm
- PubMed for Librarians: https://nnlm.gov/classes/pml (free)

In person

- Science Boot Camp for Librarians (annual): http://guides.library.umass.edu/sciboot18
- Social Science Librarians Boot Camp (annual): http://sites.tufts.edu/sslbc2018/
Don’t overlook the institution your library is supporting. They often will have resources that you can take advantage of as well. Be on the lookout for:

- Data Use and Data Management
  - Data Labs
  - Statisticians
- Mentorship of students
- Non-library conferences
- On-campus research days and poster presentations

- Software and tools:
  - R
  - Rayyan
  - Covidence
  - NVivo
  - SUMARI

- Study Design
  - IRB
  - CITI Training
Questions?
References
2. University of Twente. Study Information. University of Twente. 