INFO 6750 Health Sciences Literature and Information Sources
Summer 2025

Course Type: Online
Instructor: Kaitlin Fuller, MLIS and Leah Boulos, MLIS
Contact info: Kaitlin – kfuller@stfx.ca
Leah – leah.boulos@dal.ca
Please include both of us on all emails about the course.
Office hours: TBD
Course website: Brightspace
Tutorials: Online

Communication Expectations
You can expect timely communication from us, we aim to respond to emails within **two business days**. The best way to reach us is via **email**, and we ask that you **include both instructors** in your email.

In the event of any unexpected changes or emergencies, we will communicate through **Brightspace announcements** and provide email updates as needed.

"EBM extends the librarians' role beyond identification of the literature to involvement in practicing and teaching quality filtering and critical appraisal of the literature. These activities require librarians to acquire new knowledge and develop new skills."

Scherrer, C. S., & Dorsch, J. L. (1999). The evolving role of the librarian in evidence-based medicine. *Bulletin of the Medical Library Association*, *87*(3), 322–328.

COURSE DESCRIPTION

INFO 6750 introduces students to information resources and services used in health sciences settings with an emphasis on responding to information needs and uses, in different contexts including academic libraries, hospital libraries, and other research support settings. Designed for future information professionals and librarians, this course explores how information specialists and librarians support evidence-informed healthcare by supporting the integration of the available evidence into decision-making. Students will gain a broad understanding of the evidence synthesis landscape and the role of the search in the overall methodological rigour of these reviews.

Key topics include evidence-informed practice, the evidence pyramid, and an examination of bibliographic databases, evidence synthesis methods, and point-of-care tools in the health sciences. The course also highlights the different roles health information specialists and librarians are involved in across academic institutions, healthcare settings, and research units.

Emphasizing a practical approach, students will develop skills in searching for clinical questions, conducting comprehensive and reproducible literature searches, and in applying reporting standards to ensure transparency.

COURSE PRE-REQUISITES

INFO 5530 Information Sources, Services & Retrieval or instructor approval

LEARNING OUTCOMES

At the completion of this course, students will:

1. Define evidence-informed practice and describe how and why healthcare professionals and information specialists engage in evidence-informed practice.
2. Support evidence-based practice in clinical and academic environments.
3. Identify and evaluate core resources in health and biomedical information
4. Describe the information specialists' role in supporting the information needs of healthcare providers and researchers.
5. Recognize key differences between systematic reviews, scoping reviews, rapid reviews, narrative reviews and other forms of literature reviews.
6. Create comprehensive and transparent search strategies in two health science bibliographic databases and conduct a structured grey literature search.
7. Integrate conduct standards, reporting guidelines, and provide peer-to-peer feedback to produce reproducible and transparent search strategies.
8. Demonstrate effective communication skills to inform, educate, or advocate for a health-information related topic
9. Understand current advancements in artificial intelligence in the health information space, and how to apply tools in health information-related work.

TECHNOLOGY REQUIREMENTS

INFO 6750 is offered fully online using a combination of synchronous and asynchronous approaches. Learning materials include Brightspace, Dalhousie University Libraries resources including full text and bibliographic databases, online drug and clinical information resources, citation management software,

and videos that are pre-recorded or available from online sources. Synchronous lectures will be offered using Blackboard Collaborate.

DESCRIPTION OF CLASS FORMAT

INFO 6750 is fully online with content split between synchronous and asynchronous delivery.

Lectures will be offered synchronously using Blackboard Collaborate on **Wednesdays, 6:30-8:30pm** Halifax time. Direct links to each lecture will be embedded in the course schedule and provided on Brightspace.

All other course activities will be asynchronous.

LEARNING MANAGEMENT SYSTEM SITE INFORMATION

All course materials will be delivered using Dalhousie Brightspace (INFO 6750 2025 Summer). The Brightspace will include descriptions of assignments, rubrics, select course readings, links to external content such as videos and learning modules, class announcements, and discussion boards.

Students will be expected to submit all assignments using Brightspace. Information about how to do this and specifics about each assignment will be included Brightspace.

INSTRUCTIONAL METHODS

- **Lectures:** Will provide an opportunity for us to come together and explore the topics outlined in the course schedule. Synchronous sessions will allow for real-time discussion and/or activities.
- **Worksheets:** During synchronous sessions to practice skills and topics covered. These will typically be completed as groups.
- **Group discussions:** through discussion boards and during synchronous sessions to expand on content as a community online.
- **Readings, videos, and podcasts:** Will give students the opportunity to learn content independently. Topics will be reinforced and built upon during synchronous classes.
- **Labs:** These smaller assignments will be delivered asynchronously to give students hands-on experience with established methods and best practices.
- **Assignments** will give students the opportunity to develop and reinforce skills and competencies.
- **Guests:** Invited guest speakers will be involved in a few sessions throughout the semester. They will either be recorded videos or attend our synchronous class time.
- **Asynchronous modules and knowledge checkers**: Will give students the opportunity to learn content independently and will involve participation. Topics will be reinforced and built upon during synchronous classes.

LEARNING MATERIALS

There is no textbook for this course. Class readings are listed in the course schedule and are available online through Dalhousie Libraries or Brightspace.

METHODS OF EVALUATION

Detailed instructions regarding each assignment will be provided. Assessment of all assignments is directly related to attention to the instructions, clarity of expression and presentation, and evidence of significant analysis and reflection.

See also the Grading Policy.

COMPONENT	DETAILS	DUE DATE	VALUE/WEIGHT
Search Assignment	This project builds on skills learned throughout the course and is the type of work that health librarians do regularly Part 1: MEDLINE search Part 2: Peer Review Part 3: Final Report	Part 1: Part 2: Part 3: See course schedule	Part 1: 5% (pass/fail) Part 2: 5% (pass/fail) Part 3: 30% **Total: 40%**
Topic Presentation	An instructional presentation to teach a health information-related skill to a predetermined audience	Presentation dates: TBD	**10%**
Labs	Short assignments related to course material	See course schedule	**30%** (10% x 3)
Reflections	Reflections content and personal learning	See course schedule	Course reflections: 5% (2.5% x 2) Final reflection: 5% **Total: 10%**
Reading discussion boards	Discussion board post	See course schedule	**10%** (5% x 2)

To support your learning throughout the course, there will be several required activities that are not graded but are important for your success. These include self-assessment evaluations at the beginning and end of the course, as well as knowledge checkers to help you monitor your understanding. There will also be in-class activities that reinforce key concepts during the synchronous classes, and many of these will involve group discussions. Additionally, assigned readings will provide important background and context for each topic. While these components are not for credit, it is important to fully engage with all of the course material to prepare for graded assessments and meet the learning outcomes.

INTEGRATION OF MI Competencies

PROGRAM COMPETENCY	COURSE LEARNING OUTCOME	COURSE ASSESSMENT
Adaptation	8,9	Individual Presentations Discussion board reading Group work activities (no credit)
Collaboration	8,7	Individual Presentations Peer Review Assignment Group work activities (no credit)
Commitment to equity, diversity, inclusion, accessibility, and decolonization	3,6,8,9	Discussion Board 1 Group work activities (no credit)
Communication	7,8,1	Individual Presentations Peer Review Assignment Reflections Discussion Board
Digital and technological literacy	8,6,3	Search assignment Lab 1-3 Group work activities (no credit)
Evidence-based practices	1,2,4,5	Lab 1-3 Search assignment Reflection Group work activities (no credit)
Leadership	7,8	Final Reflection
Learning	1,2,3,4,5,6,7,8	Reflection 1,2 Final Reflection Group work activities (no credit)
Management	3	Group work activities (no credit)
User-centred design	3	Group work activities (no credit)

COURSE EXPECTATIONS

As your instructors, we expect that you will:

- Take responsibility for your own learning;
- Ask questions when you don't understand;
- Make a real effort to engage with your instructors and fellow students in an online environment;
- Participate respectfully in synchronous group work and class discussions, valuing diverse perspectives and experiences;
- Engage in asynchronous content such as modules, readings, videos, and online discussions;
- Complete all assignments to the best of your ability and submitted according to posted instructions;
- Treat your fellow students and instructor with respect;
- Uphold academic integrity in all coursework;
- Be transparent about the use of artificial intelligence by way outlined in this syllabus.

As students, you are entitled to expect that we will:

- Show curiosity about your learning and respect for you;
- Make a real effort to engage with you in an online environment;
- Ensure that course materials are relevant and current;
- Clearly communicate any changes to the course schedule, content, or assignments through Brightspace announcements;
- Respond to your questions by 2 business days;
- Establish and maintain a constructive environment for learning;
- Plan class materials, and assignments to help you achieve the course goals;
- Provide clear guidance for assignments, assessment criteria, and be transparent about our goals for the course and your learning;
- Provide timely and useful feedback.

CLASS POLICIES

Attendance

Class attendance is required in all MI courses. Attendance records will be kept by the instructor. Portions of some classes will be recorded.

Citation Style

As this course is on health information, and health librarians support users using a variety of styles but most often Vancouver style, this course will require you to use **Vancouver style**. Please use Vancouver style in your assignments to briefly identify (cite) other people's ideas and information and to indicate the sources of these citations in the References list at the end of the assignment.
For more information on Vancouver style, consult NLM Citing Medicine:
https://www.ncbi.nlm.nih.gov/books/NBK7256/

Due Dates
Each individual assignment will include two dates: a recommended due date, which helps with course pacing and aligns assignments with the material being covered, and a final deadline, which is required for administrative purposes such as grading and assignment functionality. Late penalties of 5%/day up to 3 days will only apply to the final deadline, as these dates must remain firm for administrative reasons.

Assignments done in collaboration with others (such as the search peer review) must be submitted by the final deadline, to facilitate your colleagues completing their own work.

Use of Artificial Intelligence
You have the option to use generative artificial intelligence tools such as Microsoft CoPilot. Permitted uses of generative AI consist of: drafting and problem solving an assignment, writing support, customized learning plan, searching (on a generative AI search platform). If you have another idea for how you would like to use generative AI in the course, please confirm with us first.

If you use generative AI you will be expected to report the following:
- Name of the program used
- Prompts and how you improved them
- Changes you made to the text
- Reflection on how the tool helped or did not help you

An example statement includes:
Microsoft CoPilot was used to enhance this discussion board post. I used prompt [name of prompt] and edited the text. This helped me better articulate my ideas.

Uses of Generative AI that are not permitted:
- Summarizing and synthesizing an entire article or book chapter for you is not permitted. This practice runs the risk of copyright infringement as the authors did not give permission for their works to be used to train an AI.
- Creating Boolean queries (unless otherwise indicated). We will cover this later in the course, but until we get there you will need to write these searches yourself.

Missed or Late Academic Requirements due to Student Absence
Dalhousie University recognizes that students may experience short-term physical or mental health conditions, or other extenuating circumstances that may affect their ability to attend required classes, tests, exams or submit other coursework.

Dalhousie students are asked to take responsibility for their own short-term absences (3 days or less) by contacting their instructor by phone or email prior to the academic requirement deadline or scheduled time **AND** by submitting a completed Student Declaration of Absence form to their instructor in case of missed or late academic requirements. Only 2 separate Student Declaration of Absence forms may be submitted per course during a term.

GRADING POLICY

A+	90-100	Demonstrates original work of distinction.
A	85-89	Demonstrates high-level command of the subject matter and an ability for critical analysis.
A-	80-84	Demonstrates above-average command of the subject matter.
B+	77-79	Demonstrates average command of the subject matter.
B	73-76	Demonstrates acceptable command of the subject matter.
B-	70-72	Demonstrates minimally acceptable command of the subject matter.
F	<70	Unacceptable for credit towards a Master's degree.

ACCOMMODATION POLICY FOR STUDENTS

The Student Accessibility Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students on the Halifax campus who request accommodation as a result of: a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (NS, NB, PEI, NFLD).
If there are aspects of the design, instruction, and/or experiences within this course that result in barriers to your inclusion please contact the Student Accessibility Centre. Please visit www.dal.ca/access for more information and to obtain the Request for Accommodation form.

A note taker may be required as part of a student's accommodation. Visit https://www.dal.ca/campus_life/academic-support/accessibility/accommodations-/classroom-accommodation.html for more details.

Please note that your classroom may contain accessible furniture and equipment. It is important that these items remain in the classroom, undisturbed, so that students who require their use will be able to fully participate.

ACADEMIC INTEGRITY

In general: The commitment of the Faculty of Management is to graduate future leaders of business, government and civil society who manage with integrity and get things done. This is non-negotiable in our community and it starts with your first class at Dalhousie University. So, when you submit any work for evaluation in this course or any other, please ensure that you are familiar with your obligations under the Faculty of Management's Academic Integrity Policies and that you understand where to go for help and advice in living up to our standards. You should be familiar with the Faculty of Management Professor and Student Contract on Academic Integrity, and it is your responsibility to ask questions if there is anything you do not understand.

Dalhousie offers many ways to learn about academic writing and presentations so that all members of the University community may acknowledge the intellectual property of others. Knowing how to find, evaluate, select, synthesize and cite information for use in assignments is called being “information literate”. Information literacy is taught by Dalhousie University Librarians in classes and through Dalhousie Libraries’ online Citing & Writing tutorials.

Do not plagiarize any materials for this course. For further guidance on what constitutes plagiarism, how to avoid it, and proper methods for attributing sources, please consult the University Secretariat’s Academic Integrity page.

Please note that Dalhousie subscribes to software that checks for originality in submitted papers. Any paper submitted by a student at Dalhousie University may be checked for originality to support instructors in confirming that the student has not plagiarized from other sources. Plagiarism is considered a very serious academic offence that may lead to loss of credit, suspension or expulsion from the University, or even the revocation of a degree. It is essential that there be correct attribution of authorities from which facts and opinions have been derived. At Dalhousie, there are University Regulations which deal with plagiarism and, prior to submitting any paper in a course; students should read the Policy on Intellectual Honesty contained in the Academic Calendar.

Furthermore the University’s Senate has affirmed the right of any instructor to require that student assignments be submitted in both written and computer readable format, e.g.: a text file or as an email attachment, and to submit any paper to a check such as that performed by the plagiarism detection software. As a student in this class, you are to keep an electronic copy of any paper you submit, and the course instructor may require you to submit that electronic copy to plagiarism detection software. Use of third-party originality checking software does not preclude instructor use of alternate means to identify lapses in originality and attribution. The result of such assessment may be used as evidence in any disciplinary action taken by the Senate.

Finally: If you suspect a lapse in academic integrity by colleagues or a professor, you may confidentially share your concerns via DeanManagement@dal.ca.

Faculty of Management clarification on plagiarism versus collaboration:

There are many forms of plagiarism, for instance, copying on exams and assignments. There is a clear line between group work on assignments when explicitly authorised by the professor and copying solutions from others. It is permissible to work on assignments with your friends but only when the professor gives you permission in the specific context of the assignment. University rules clearly stipulate that all assignments should be undertaken individually unless specifically authorised.

Specific examples of plagiarism include, but are not limited to, the following:

- Copying a computer file from another student, and using it as a template for your own solution
- Copying text written by another student
- Submitting the work of someone else, including that of a tutor as your own

An example of acceptable collaboration includes the following:

- When authorised by the professor, discussing the issues and underlying factors of a case with fellow students, and then each of the students writing up their submissions individually, from start to finish.

UNIVERSITY STATEMENTS

This course is governed by the academic rules and regulations set forth in the University Calendar and the Senate.

ACCESSIBILITY

The Student Accessibility Centre is Dalhousie's centre of expertise for matters related to student accessibility and accommodation. We work collaboratively with Dalhousie and King's students, faculty, and staff to create an inclusive educational environment for students. The Centre is responsible for administering the university-wide Student Accommodation Policy working across all programs and faculties.

STUDENT CODE OF CONDUCT

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

DIVERSITY AND INCLUSION

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness (Strategic Priority 5.2).

INTERNATIONALIZATION

At Dalhousie, “thinking and acting globally” enhances the quality and impact of education, supporting learning that is “interdisciplinary, cross-cultural, global in reach, and orientated toward solving problems that extend across national borders.”

RECOGNITION OF MI’KMAQ TERRITORY

Dalhousie University is located in Mi’kma’ki, the ancestral and unceded territory of the Mi’kmaq. We are all Treaty people. For more information about the purpose of territorial acknowledgements, or information about alternative territorial acknowledgements if your class is offered outside of Nova Scotia, please visit https://native-land.ca/.

The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit the office in the McCain Building (room 3037) or contact the programs at elders@dal.ca or 902-494-6803 (leave a message).

FAIR DEALING POLICY

The Dalhousie University Fair Dealing Policy provides guidance for the limited use of copyright protected material without the risk of infringement and without having to seek the permission of copyright owners. It is intended to provide a balance between the rights of creators and the rights of users at Dalhousie.

COURSE SCHEDULE

Date, Topic, Objectives	Readings, Recordings, Resources	Reminders & Assignments
Week 1 **Course Introduction** • Syllabus review • Class introductions • Introduction to health librarianship & Evidence Based Practice Synchronous session, May 7: • Syllabus review • Course expectations • Lecture: Health information professional role	**Complete:** Self assessment quiz (MLA) (no marks) **Post:** Introduction discussion board (no marks) **Watch:** Introduction Videos **Close read:** The syllabus **Required Reading** Read: Greenhalgh T. *How to read a paper: The basics of evidence-based medicine.* 5nd ed. West Sussex, UK: John Wiley & Sons, Ltd.; 2014. Chapter 1 pp.1-14. [e-book] Read: Fiske, S. T. (2013). Gaining trust as well as respect in communicating to motivated audiences about science topics. *The Proceedings of the National Academy of Sciences, 111*(Supplement 4), 13593-13597. https://doi.org/10.1073/pnas.1317505111 Read: Johns Hopkins' Tragedy: Could Librarians Have Prevented a Death? [news] Pick **at least 2** of the below & **quick read/skim**: *Librarians' Roles* ▪ Vaughan, K. T., Hayes, B. E., Lerner, R. C., McElfresh, K. R., Pavlech, L., Romito, D., Reeves, L. H., & Morris, E. N. (2013). Development of the research lifecycle model for library services. Journal of the Medical Library Association : JMLA, 101(4), 310–314. https://doi.org/10.3163/1536-5050.101.4.013 ▪ Barr-Walker, J., & Sharifi, C. (2019). Critical librarianship in health sciences libraries: an introduction. *Journal of the Medical Library Association: JMLA*, *107*(2), 258. ▪ Brettle, A., Maden, M., & Payne, C. (2016). The impact of clinical librarian services on patients and health care organisations. *Health Information & Libraries Journal*, *33*(2), 100-120. ▪ Westmark, D. M., Hartman, T. L., & Schmidt, C. M. (2022). Landscape of health sciences librarian-mediated search services. *Health Information & Libraries Journal*, *39*(4), 365-376. *Medical Professionals* **Quick Read/Skim** the below to get an idea of how some medical professionals are trained ▪ Quickly browse the CanMEDS framework (download the document or use the quick links on the right-hand side) to see the abilities identified for physicians to effectively meet the health care needs of the people they serve. This is foundation for all educational standards for physicians in Canada.	*Lab 1 assigned*

	▪ **Focus on the Scholar Role** https://www.royalcollege.ca/en/standards-and-accreditation/canmeds/scholar-role.html **Quick Read/Skim:** Naeem, S. B., & Bhatti, R. (2020). Measures of self-efficacy among doctors in conducting an online search for clinical decision making. *Health Information & Libraries Journal*, *37*(2), 128-142.	
Week 2 **Evidence-Based Practice (EBP), Health Information Sources, and Research Methods** • History and purpose of EBP • Levels and types of health evidence (EBM Pyramid and 5S Pyramid) • Sources of health information • High-level overview of evidence synthesis methods Synchronous session, May 14: • Levels and types of health evidence (EBM Pyramid and 5S Pyramid) • Practice searching in pre-appraised information (DynaMed, CPS, Cochrane	**Post:** Reading discussion board (no marks) **Required Reading** Quick Read/Skim: Straus, S. E., Glasziou, P., Richardson, W. S. (Warren S., & Haynes, R. B. (2019). *Evidence-based medicine : how to practice and teach EBM* (Fifth edition.). Elsevier. Chapter 1 Read: Alper, B. S., & Haynes, R. B. (2016). EBHC pyramid 5.0 for accessing preappraised evidence and guidance. *BMJ evidence-based medicine*, *21*(4), 123-125 Read: Sackett, D. L., Rosenberg, W. M. C., Gray, J. A. M., Haynes, R. B., & Richardson, W. S. (1996). Evidence based medicine: What it is and what it isn't. it's about integrating individual clinical expertise and the best external evidence. *British Medical Journal*, 312(7023), 71-72 Read: Taylor, W., & Kindred, C. (2018, February 26). *African-Americans are more likely to distrust the medical system. Blame the Tuskegee experiment*. The Nib. https://thenib.com/tuskegee-experiment/ [comic] Read: Rogers, B. J., Swift, K., van der Woerd, K., Auger, M., Halseth, R., Atkinson, D., ... & Bedard, A. (2019). *At the interface: Indigenous health practitioners and evidence-based practice* (pp. 1-34). Prince George, BC, Canada: National Collaborating Centre for Aboriginal Health. Read: Epstein, D., ProPublica. (2017, February 22) When evidence says no, but doctors say yes. The Atlantic. Retrieved from: https://www.theatlantic.com/health/archive/2017/02/when-evidence-says-no-butdoctors-say-yes/517368/ Quick Read/Skim: Nevo, I., & Slonim-Nevo, V. (2011). The myth of evidence-based practice: Towards evidence-informed practice. *British journal of social work*, *41*(6), 1176-1197 **Optional:** Quick Read/Skim: Feinstein, A. R., & Horwitz, R. I. (1997). Problems in the 'evidence' of 'evidence-based medicine'. *American Journal of Medicine,* 103(6), 529- 535. doi:10.1016/S0002- 9343(97)00244-1 Complete the online module, including watching the PubMed videos: https://gerstein.library.utoronto.ca/sites/default/public/asking-questions-locating-evidence-nur-430/#/	*Lab 2 assigned* Lab 1 due

Clinical Answers) • Critical evaluation of PoC Tools - group activity & search practice	Listen: Freakonomics Podcast. Bad Medicine, Part 1 – 3 [Audio podcast, rebroadcast]. Part 1 Bad Medicine, Part 1: The Story of 98.6 : http://freakonomics.com/podcast/bad-medicine-part-1-story-rebroadcast/ (44min) Part 2 Bad Medicine, Part 2: (Drug) Trials and Tribulations http://freakonomics.com/podcast/bad-medicine-part-2-drug-trials-tribulationsrebroadcast/ (48min) Part 3: Bad Medicine, Part 3: Death by Diagnosis https://freakonomics.com/podcast/bad-medicine-part-3-death-by-diagnosis-rebroadcast/ (47min)	
Week 3 **Searching for Health Information, Part 1: Clinical Information** • Framing research questions (PICO) • PubMed (videos) Synchronous session, May 21: • PICO Review • Search Concept Identification • Database Demo (CINAHL, PubMed & TRIP) • Group Search & Resource Critical Appraisal Activity	**Post:** Reading discussion board (no marks) **Required Reading:** Read: Richardson, W. S., Wilson, M. C., Nishikawa, J., & Hayward, R. S. (1995). The well-built clinical question: a key to evidence-based decisions. *ACP journal club*, *123*(3), A12–A13. Quick Read/Skim: Straus, S. E., Glasziou, P., Richardson, W. S. (Warren S., & Haynes, R. B. (2019). *Evidence-based medicine : how to practice and teach EBM* (Fifth edition.). Elsevier. Chapter 2 Quick Read/Skim: Ioannidis JP. Why most published research findings are false. Chance. 2005 Sep 1;18(4):40-7. • ***Optional****:* read the two follow-up comments by Goodman & Greenland (2007) and Ioannidis (2007) Read: Beth Israel Deaconess Medical Center. (2020, September 21). *Study reveals racial disparities in clinical trial recruitment and points to strategies to achieve more inclusive clinical research*. https://www.bidmc.org/about-bidmc/news/2020/09/racial-disparities-in-clinical-trial-recruitment [website] **Watch:** Welch Medical Library PubMed Series: https://www.youtube.com/playlist?list=PLF2KCgTC6mbQX8Creoyl4jI8q-xeyfcyj • Required Watch Video 1-4 • Optional viewing 5-6 (this will help prepare you for comprehensive searching Week 5 & 6) **Optional:** • Listen to podcast – Does Perfect Skin Really Exist (35min) https://podcasts.apple.com/us/podcast/does-perfect-skin-really-exist/id1566425638?i=1000526567233 • Watch Recorded Webinar New Media, New Advocacy: How Racial Bias Is Being Tackled In Medicine (October 2021) (about 1 hour) https://www.nnlm.gov/training/class/new-media-new-advocacy-how-racial-bias-being-tackled-medicine	*Reflection 1 assigned*

WEEK OFF May 28		
Week 4 **Systematic Reviews and Other Evidence Syntheses** • Evidence synthesis methods • Steps in a systematic review Synchronous session, June 4: • Types of systematic reviews • Other evidence synthesis methods • Steps in a systematic review (review) • Methodological standards and reporting guidelines (Cochrane, JBI, PRISMA) • Data management tools	**Watch:** Yale Systematic Searches Videos Part 1: Introduction (7:40) - https://library.medicine.yale.edu/tutorials/948 Part 2: Conducting a systematic review (11:40) - https://library.medicine.yale.edu/tutorials/980 **Browse:** Dalhousie Libraries' Systematic Review LibGuide: http://dal.ca.libguides.com/systematicreviews • **Take a close read:** "What is a Systematic Review?": https://dal.ca.libguides.com/systematicreviews/systematicreviewresources **Readings** Read: Rethlefsen, M. L., Murad, M. H., & Livingston, E. H. (2014). Engaging medical librarians to improve the quality of review articles. *JAMA, 312*(10), 999–1000. https://doi.org/10.1001/jama.2014.7969 Read: Greenhalgh, T., Thorne, S., & Malterud, K. (2018). Time to challenge the spurious hierarchy of systematic over narrative reviews? *European Journal of Clinical Investigation, 48*(6), e12931. https://doi.org/10.1111/eci.12931 Quick Read/Skim: Munn, Z., Stern, C., Aromataris, E., Lockwood, C., & Jordan, Z. (2018). What kind of systematic review should I conduct? A proposed typology and guidance for systematic reviewers in the medical and health sciences. *BMC Medical Research Methodology, 18*(1), 5. https://doi.org/10.1186/s12874-017-0468-4 Quick Read/Skim: Munn, Z., Peters, M. D. J., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology, 18*(1), 143. https://doi.org/10.1186/s12874-018-0611-x **Have fun with:** Synthesis Labyrinth: Racing the Outbreak (Queen's University) - https://queensu.qualtrics.com/jfe/form/SV_0J7vfsPs7oNlQmq **Create an account in Covidence** using your Dal email: https://www.covidence.org/ • Optional: play around with the Demo Review **Important resources:** • JBI Manual for Evidence Synthesis • Cochrane Handbook for Systematic Reviews of Interventions • Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) • PRISMA-ScR (for Scoping Reviews)	*Search Assignment Part 1 (MEDLINE Search) assigned* Reflection 1 due Lab 2 due

Week 5
 	
Searching for Health Information, Part 2: Complex Search Strategies
 	
• Vertical, multi-line searching using subject headings and database-specific syntax (Ovid MEDLINE)
• Why it's necessary for comprehensive searches that prioritize sensitivity, transparency and reproducibility
 	
Synchronous session, June 11:
• Searching with subject headings and other field tags
• Advanced Search techniques such as proximity and truncation in Ovid MEDLINE
• Saving, editing, retrieving, and sharing searches and results in Ovid MEDLINE
	Browse: Searching the Literature: A Guide to Comprehensive Searching in the Health Sciences (University of Toronto Libraries) - https://guides.library.utoronto.ca/comprehensivesearching
	• **Take a close read:**
	  ○ Advanced Lit Searching Cheat Sheet https://guides.library.utoronto.ca/ld.php?content_id=28564774
	  ○ Precision vs. Sensitivity https://guides.library.utoronto.ca/c.php?g=577919&p=4304403
	
	Complete this Module:
	The Essentials of Conducting Systematic Reviews – Module 4: Searching for Eligible Studies (Queen's University) - https://healthsci.queensu.ca/sites/opdes/files/modules/essentials-conducting-systematic-reviews-M4/#/
	• Especially Lesson 3: Developing Comprehensive Search Strategies and Lesson 4: Exporting and Managing Search Results
	
	Required Reading
	• Read: Anderson, P. F., Capellari, E., Haines, K., Hansen, S., James, L., MacEachern, M., Rana, G. K., Saylor, K., & Townsend, W. A. (2022, September 9). *Sensitive search terms in systematic searches*. University of Michigan - Deep Blue. https://doi.org/10.7302/6408
	  ○ Optional: If you're interested in exploring this topic further, watch this webinar (1h25min): Language matters: Handling tough terms in systematic searching - https://guides.lib.umich.edu/TaubmanTalks/ToughTerms
	
	Important resource: Ovid MEDLINE 2025 Database Guide - https://ospguides.ovid.com/OSPguides/medline.htm	

Week 6	**Required Reading**	*Search Assignment*

Searching for Health Information, Part 3: The Art of Search • Advanced search tips, tricks, and troubleshooting • Search refinement • Reproducibility • Peer review (PRESS) Synchronous session, June 18: • Balancing sensitivity vs. precision • Using target articles • Search filters • Search testing and troubleshooting • Search critical appraisal exercise • Introduction to the PRESS guideline for search peer review	Read: McGowan, J., Sampson, M., Salzwedel, D. M., Cogo, E., Foerster, V., & Lefebvre, C. (2016). PRESS peer review of electronic search strategies: 2015 guideline statement. *Journal of Clinical Epidemiology, 75*, 40–46. https://doi.org/10.1016/j.jclinepi.2016.01.021 Read: Amanda Wanner: Using a "gold standard" set to test your search - https://expertsearching.wordpress.com/2016/12/13/using-a-gold-standard-set-to-test-your-search/ **Important resources:** • ISSG Search Filter Resource • University of Alberta Search Filters	*Part 2 (Peer Review) assigned* **Search Assignment Part 1 (MEDLINE Search) FINAL DEADLINE**
Week 7 **Search Translation, Documentation, and Reporting** • Translation into Embase.com • Translation into EBSCO CINAHL	**Watch:** Dalhousie Libraries Search Translation Videos MEDLINE to Embase (7:51) - https://www.youtube.com/watch?v=gxk0JqbUauc&t=42s MEDLINE to CINAHL (7:52) - https://www.youtube.com/watch?v=G8A4OBrq9lQ **Important resource:** Search Syntax Guide (Dalhousie Libraries) **Required Reading**	*Search Assignment Part 3 (Final Report) assigned* *Reflection 2 assigned* **Search Assignment Part 2 (Peer**

Synchronous session, June 23: • Review translation into EBSCO CINAHL • Introduction to Scopus • Search translation methods and tools • Search documentation and reporting standards (PRISMA-S, searchRxiv) • Process and file management	Read: Rethlefsen, M. L., Kirtley, S., Waffenschmidt, S., Ayala, A. P., Moher, D., Page, M. J., & Koffel, J. B.; PRISMA-S Group. (2021). PRISMA-S: An extension to the PRISMA statement for reporting literature searches in systematic reviews. *Systematic Reviews, 10*(1), 39. https://doi.org/10.1186/s13643-020-01542-z Read: Submission guidelines: searchRxiv - https://www.cabidigitallibrary.org/journal/searchrxiv/submission-guidelines	**Review) FINAL DEADLINE**
WEEK OFF July 2 *[try to finish your two database searches for the search assignment]*		
Week 8 **Grey Literature and Supplementary Search Methods** • Grey literature sources • Bias in reviews (eg reporting bias, language...) • Why we do supplementary searches Synchronous session, July 9:	**Required:** **Complete** Reporting Bias Module: https://gerstein.library.utoronto.ca/sites/default/public/articulate/identifying-and-reporting-biases/#/ **Complete** Grey Literature Module: https://gerstein.library.utoronto.ca/sites/default/public/articulate/grey-literature/#/ **Watch** Searching Google Scholar for KS video: https://mediaspace.umn.edu/media/t/1_03n3hc2f **Read:** Saleh, A. A., Ratajeski, M. A., & Bertolet, M. (2014). Grey literature searching for health sciences systematic reviews: A prospective study of time spent and resources utilized. *Evidence Based Library and Information Practice*, *9*(3), 28. **Read:** Green, D. (2025, April 17). *Guest post: Preprints serve the anti-science agenda – This is why we need peer review*. The Scholarly Kitchen. https://scholarlykitchen.sspnet.org/2025/04/17/guest-post-preprints-serve-the-anti-science-agenda-this-is-why-we-need-peer-review/ [blog] **Optional**	*Discussion Board 1 assigned* Reflection 2 due

• Advanced Google search methods • Citation searching (backwards and forwards) • Practice building a grey literature search plan (group activity) **Guest Panel:** The Reference Interview and How to Establish Expertise	Browse: Evaluating online information: use the CRAAP test. https://library.carleton.ca/help/evaluating-online-information-use-crap-test	
Week 9 **Artificial Intelligence** • Describe different types of generative AI search tools, specifically RAG search tools • Describe the some ethical, and environmental issues of the use of generative AI in general • Possible guest speaker - recording Synchronous session, July 16: • Critically evaluate different	**Required** **Post:** Discussion board (for marks) **Required Reading** Read: Tay, A. (2025, March). *Testing AI academic search engines (1): Defining the tools*. Musings about librarianship. https://musingsaboutlibrarianship.blogspot.com/2025/03/testing-ai-academic-search-engines-1.htm Read: Tay, A. (2025, February). *When is a hallucination not a hallucination? The role of implicit knowledge in RAG*. Musings about librarianship. https://musingsaboutlibrarianship.blogspot.com/2025/02/when-is-hallucination-not-hallucination.html Read: Ghodgaonkar, I., & Staten, C. (2023, October 25). *The sleuth and the storyteller: The dynamic duo behind RAG*. Determined AI. https://www.determined.ai/blog/rag Quick Read/Skim: Lieberum, J. L., Töws, M., Metzendorf, M. I., Heilmeyer, F., Siemens, W., Haverkamp, C., ... & Eisele-Metzger, A. (2025). Large language models for conducting systematic reviews: on the rise, but not yet ready for use–a scoping review. Journal of Clinical Epidemiology, 111746. Quick Read/Skim: Bernard, N., Sagawa Jr, Y., Bier, N., Lihoreau, T., Pazart, L., & Tannou, T. (2025). Using artificial intelligence for systematic review: the example of elicit.;BMC Medical Research Methodology, 25(1), 75. Quick Read/Skim: Cierco Jimenez, R., Lee, T., Rosillo, N. et al. Machine learning computational tools to assist the performance of systematic reviews: A	*Lab 3 assigned* *Presentations assigned* Search Assignment Part 3 (Final Report) due Discussion Board 1 due

generative AI Search Tools in terms of function and results • Define different types of generative AI Search tools and describe some of the ethical, environmental, and legal issues • Practice searching in different generative AI Search tools (group worksheet)	mapping review. BMC Med Res Methodol 22, 322 (2022). https://doi.org/10.1186/s12874-022-01805-4 Watch: Weise, K., Bult, L., Surdam, J., & Dompor, R. (2025, March 17). *How A.I. companies are turning into energy companies* [Video]. The New York Times. https://www.nytimes.com/video/business/energy-environment/100000010036088/how-ai-companies-are-turning-into-energy-companies.html (2min) Browse/ Sweetman, Rebecca. (2023) Some Harm Considerations of Large Language Models. [LibGuide Graphic] **Optional:** Watch: For more information on the literature and how it works, watch the creator of the-literature.com describe how it works: https://www.youtube.com/watch?v=WQRVX8Rq9lA&t=2s (he actually shows the code used) Algorithm bias in this quick activity by The Artefact Group	
Week 10 **Shark Week: Research Integrity and Scholarly Communications** • Integrity in health research Synchronous session, July 23: • Scholarly publishing landscape • Guest Speaker • Papermills • Predatory publishers • Author profiles • Peer review	**Required** **Post:** Discussion board (for marks) **Required Readings** Read: Irfanullah, H. (2024, January 9). *Trust in scholarly publishing*. The Scholarly Kitchen. https://scholarlykitchen.sspnet.org/2024/01/09/trust-in-scholarly-publishing/ [blog] Read: Hagve, M. (2020, August 17). *The money behind academic publishing*. Tidsskrift for Den norske legeforening. https://tidsskriftet.no/en/2020/08/kronikk/money-behind-academic-publishing [news] Read: Magee, R. (2023, February 20). *Elsevier parent's profit up 20 per cent last year*. Research Professional News. https://www.researchprofessionalnews.com/rr-news-europe-infrastructure-2023-2-elsevier-parent-s-profit-up-20-per-cent-last-year/ [news] *Predatory Publishers:* Read: Elmore, S. A., & Weston, E. H. (2020). Predatory Journals: What They Are and How to Avoid Them. *Toxicologic pathology*, *48*(4), 607–610. https://doi.org/10.1177/0192623320920209 Quick Read/SKim: Bell, K. (2017). 'Predatory' open access journals as parody: Exposing the limitations of 'legitimate' academic publishing. *Triple C:*	*Discussion board 2 assigned* Lab 3 due **Reflection 1 and 2 FINAL DEADLINE**

	Communication, Capitalism & Critique. Open Access Journal for a Global Sustainable Information Society, *15*(2), 651-662 Browse/Skim: Retraction Watch. (n.d.). *The Retraction Watch Hijacked Journal Checker*. https://retractionwatch.com/the-retraction-watch-hijacked-journal-checker/ Quick Read/Skim: Oviedo-García, M. Á. (2021). Journal citation reports and the definition of a predatory journal: The case of the Multidisciplinary Digital Publishing Institute (MDPI). Research evaluation, 30(3), 405-419a. Browse Checklists: • UofT: https://onesearch.library.utoronto.ca/copyright/predatory-publishing • UofA: https://guides.library.ualberta.ca/where-to-publish/predatory-publications • CARL: https://www.carl-abrc.ca/how-to-assess-a-journal/ *Papermills:* Read: Van Noorden, R. (2023, November 6). *How big is science's fake-paper problem? Nature*. https://www.nature.com/articles/d41586-023-03464-x Read: Tricky Goose Training. (n.d.). *Paper mills discussion primer* [PDF infographic]. Read: Abalkina, A., Aquarius, R., Bik, E., Bimler, D., Bishop, D., Byrne, J., Cabanac, G., Day, A., Labbé, C., & Wise, N. (2025, January 27). *'Stamp out paper mills' — science sleuths on how to fight fake research*. *Nature*. https://www.nature.com/articles/d41586-025-00212-1 **Optional** Else, H., & Van Noorden, R. (2021). The fight against fake-paper factories that churn out sham science. *Nature*, *591*(7851), 516–519. https://doi.org/10.1038/d41586-021-00733-5 Optional Browse 10 most cited retracted papers: https://retractionwatch.com/the-retraction-watch-leaderboard/top-10-most-highly-cited-retracted-papers/ **Optional - Is MDPI a predatory publisher?** • This Scholarly Kitchen Summary (2020) does a good job outlining the growth of MDIP • A Science article on the Web of Science (2023) about the delisting • MDPI is now on the list by Predatory Reports, and IJERPH is listed below here (2023): https://predatoryreports.org/news/f/list-of-all-mdpi-predatory-publications	

	Here are some blogs about some of the issues with MDPI, and why it's being criticized lately by Predatory Reports: • Overview of the issues and discussions about MDPI right now: https://predatoryreports.org/news/f/is-mdpi-a-predatory-publisher • Peer review issues: https://predatoryreports.org/news/f/mdpi-peer-review-problem • Self citation problems: https://predatoryreports.org/news/f/mdpi-self-citation-problem • MDPI has responded to these criticisms here by Predatory Reports • The debate continues as research comes out and MDPI responds: Retraction Watch summary of a publication that assessed MDPI journals as 'predatory' retracted and replaced • P. Crosetto Blog has a nice summary: https://paolocrosetto.wordpress.com/2021/04/12/is-mdpi-a-predatory-publisher/	
Week 11 **Research Life Cycle, Data Management, Open Scholarship, and Health Systems** • Preventing research waste • Academic peer review • Working with researchers and supporting RDM • Supporting policymakers • Supporting learning health systems Synchronous session, July 30: • Guest Speaker: health	**Required Readings** Read: Mueller, B. (2024, January 22). *Top cancer center seeks to retract or correct dozens of studies*. *The New York Times*. https://www.nytimes.com/2024/01/22/health/dana-farber-cancer-studies-retractions.html Quick Read/Skim: Freedman, L. P., Cockburn, I. M., & Simcoe, T. S. (2015, June 9). The economics of reproducibility in preclinical research. *PLOS Biology, 13*(6), e1002165. https://doi.org/10.1371/journal.pbio.1002165 *Erratum in:* Freedman, L. P., Cockburn, I. M., & Simcoe, T. S. (2018, April 10). *PLOS Biology, 16*(4), e1002626. https://doi.org/10.1371/journal.pbio.1002626 Quick Read/Skim: Goldacre, B., Drysdale, H., Dale, A., Milosevic, I., Slade, E., Hartley, P., Marston, C., Powell-Smith, A., Heneghan, C., & Mahtani, K. R. (2019). COMPare: A prospective cohort study correcting and monitoring 58 misreported trials in real time. *Trials, 20*(1), 118. https://doi.org/10.1186/s13063-019-3173-2 Read: Donnelly, C. A., Boyd, I., Campbell, P., Craig, C., Vallance, P., Walport, M., Whitty, C. J. M., Woods, E., & Wormald, C. (2018). Four principles to make evidence synthesis more useful for policy. *Nature, 558*(7710), 361–364. https://doi.org/10.1038/d41586-018-05414-4 Read: About Learning Health Systems (AHRQ)	*Final Reflection assigned* Discussion 2 due **Search Assignment Part 3 (Final Report) FINAL DEADLINE** **FINAL DEADLINE FOR LABS 1, 2, 3**

research data management • Open science/open scholarship • Research waste and peer review • Canada's current health research and health system landscape		
Week 12 **The Future of Health Librarianship** • Leadership and management in health libraries • Health library advocacy and professional organizations • Professional development opportunities • Guest speaker recordings Synchronous session, August 6: Individual presentations	**Required** **Complete:** Self Assessment quiz MLA (no marks) **Watch**: Recorded Videos **Required Reading:** Read: Martin, E. R. (2019). Social justice and the medical librarian. *Journal of the Medical Library Association: JMLA*, *107*(3), 291. **Optional Reading** Quick Read/Skim one of the BMJ Christmas issues (these should be a bit fun): • Smith, G. C., & Pell, J. P. (2003). Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials. *Bmj*, *327*(7429), 1459-1461. • Lim, M. S., Hellard, M. E., & Aitken, C. K. (2005). The case of the disappearing teaspoons: longitudinal cohort study of the displacement of teaspoons in an Australian research institute. *BMJ*, *331*(7531), 1498-1500. • Gajendragadkar, P. R., Moualed, D. J., Nicolson, P. L. R., Adjei, F. D., Cakebread, H. E., Duehmke, R. M., Martin, C. A., & Sinha, A. (2022, December 19). *Taking the biscuit: Defining excessive quantities of free refreshments in a healthcare library*. *BMJ*, 379, e072846. https://doi.org/10.1136/bmj-2022-072846 • Oloman, J. (2022). I tried to survive as a Doctor in The Sims 4.BMJ, *379*.	**Final Reflection FINAL DEADLINE** **Presentations FINAL DEADLINE** **Discussion Board 1 and 2 FINAL DEADLINE**

Supplementary Resources:

- Taubman Library Talks: https://guides.lib.umich.edu/c.php?g=1222871&p=9285153
- National Library of Medicine(NLM): Resources for hospital and health sciences librarians: https://www.nnlm.gov/guides/resources-hospitalhealth-sciences-libraries
- National Library of Medicine(NLM) Classes: https://www.nnlm.gov/training/schedule

- Library Juice Academy: https://libraryjuiceacademy.com/
- Therapeutics Initiative (UBC): https://www.ti.ubc.ca/continuing-education/events-webinars/
- Health Sciences Library Apprenticeship Program (2023) by NAHSL: https://sites.google.com/view/hslap-2023-publicaccess/home?authuser=0

Comprehensive Searching:

- UofT Comprehensive Searching guide: https://guides.library.utoronto.ca/c.php?g=577919&p=3987197
- Queens Comprehensive Searching module: https://healthsci.queensu.ca/sites/opdes/files/modules/essentials-conducting-systematic-reviews-M4/#/

Associations:

- AHSL (Association of Academic Health Sciences Libraries)
- ACRL (Association of College & Research Libraries) & select Special Interest Groups
- AHLA/ABSA (Atlantic Health Libraries Association/Association des bibliothèques de la santé de l'Atlantique)
- CHLA/ABSA (Canadian Health Libraries Assocation)
- NAHSL (North Atlantic Health Sciences Library)