Find, Save & Read Literature in the Health Sciences

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Agenda

- Overview of learning outcomes
- Introductions
- Key definitions
- **FIND relevant literature**
  - Search strategies
  - Scholarly vs. grey literature
  - Where to search
- SAVE references
  - Citation managers
- READ/ANNOTATE the literature
  - Matrix note-taking
  - Annotated bibliographies
- Q&A



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Learning outcomes

- Participants will be able to explain the difference between scholarly and grey literature.
- Participants will be able to construct a concept table of search terms for a particular research question.
- Participants will be able to search for literature using a subscription database available through the Universiti Malaya Library, as well as an open source (free) database.



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NOT on the agenda, but still important

- How to search for datasets
- How to conduct a systematic review
  - Universiti Malaya (UM) Medicine Library Guide: Systematic Reviews

Fundamentals of Reviewing Literature

1. Make decisions about which documents to review
2. Read and understand what the authors describe in those documents
3. Evaluate the ideas, research methods, and results of each publication
4. Write a synthesis that includes both the content and the critical analysis of these materials

(Garrard, 2014)

[Medicine Library Guide: Research Support]



Implementation science & information needs

Perhaps you'd like to…

- Find literature in order to better understand a population/local context, an evidence-based intervention (EBI), or a known barrier/gap to community deployment of an EBI
- Locate an evidence-based policy or guideline
- Read about an implementation research method/framework
  - For example, reach, effectiveness, adoption, implementation, maintenance (RE-AIM)
- Learn about a key component of an implementation study
  - Stakeholder engagement
  - Community based participatory research

Developing an Implementation Research Proposal

Helpful sources for formulating IR questions:

- Programme progress, annual or evaluation reports from monitoring and evaluation activities.
- Medical, health and social science literature, meta-analyses, and literature reviews.
- Scientific meetings and conferences.
- New ideas from previous research or formative qualitative studies (e.g., interviews).
- Funding agencies' annual reports.
- Questions asked by programme staff and students.
- Local documents – project progress reports, theses, dissertations, seminar proceedings.
- Annual review or dissemination meetings.
- Geographic information systems (GIS) data that identify geographic location and distribution of problems.

(WHO & UNICEF 2014)

Types of Reviews

Review types...

- **Narrative review**
- Systematic review
- Scoping review
- State-of-the-art review

How they differ...

- Different degrees of comprehensiveness in searching
- May or may not include a formal quality assessment
- Timeline and team size matters
- Qualitative vs. quantitative analysis

The Realist Review

- A literature review that seeks to answer the question…

  What works for whom under what circumstances?

- Not an X causes Y theory of thinking, but rather C-O-M, context-outcome-mechanism
- The goal is to produce a product useful to a policymaker in responding to a time-sensitive situation with limited resources
- RRs recognize that interventions are embedded in social systems

(Pawson et al., 2005; Sutton et al., 2019)

Step #1

FIND

Scholarly vs. Grey Literature

- **Scholarly literature** - written by highly-qualified researchers and have a thorough publication process, which usually involves peer-review
  - an article on a single study or a review paper on the same topic
- **Grey literature** - information produced on all levels of government, academics, business and industry in electronic and print formats not controlled by commercial publishing, i.e. where publishing is not the primary activity of the producing body
  - guidelines and policies

(Evaluating Sources: Where to Begin; GreyNet International)

Articulate a specific research question.

Use PIO, PICO, PEO, or PCC as a framework.

Population
Intervention/**E**xposure/**C**oncept
[**C**omparison, if using 'PICO']
Outcome or context

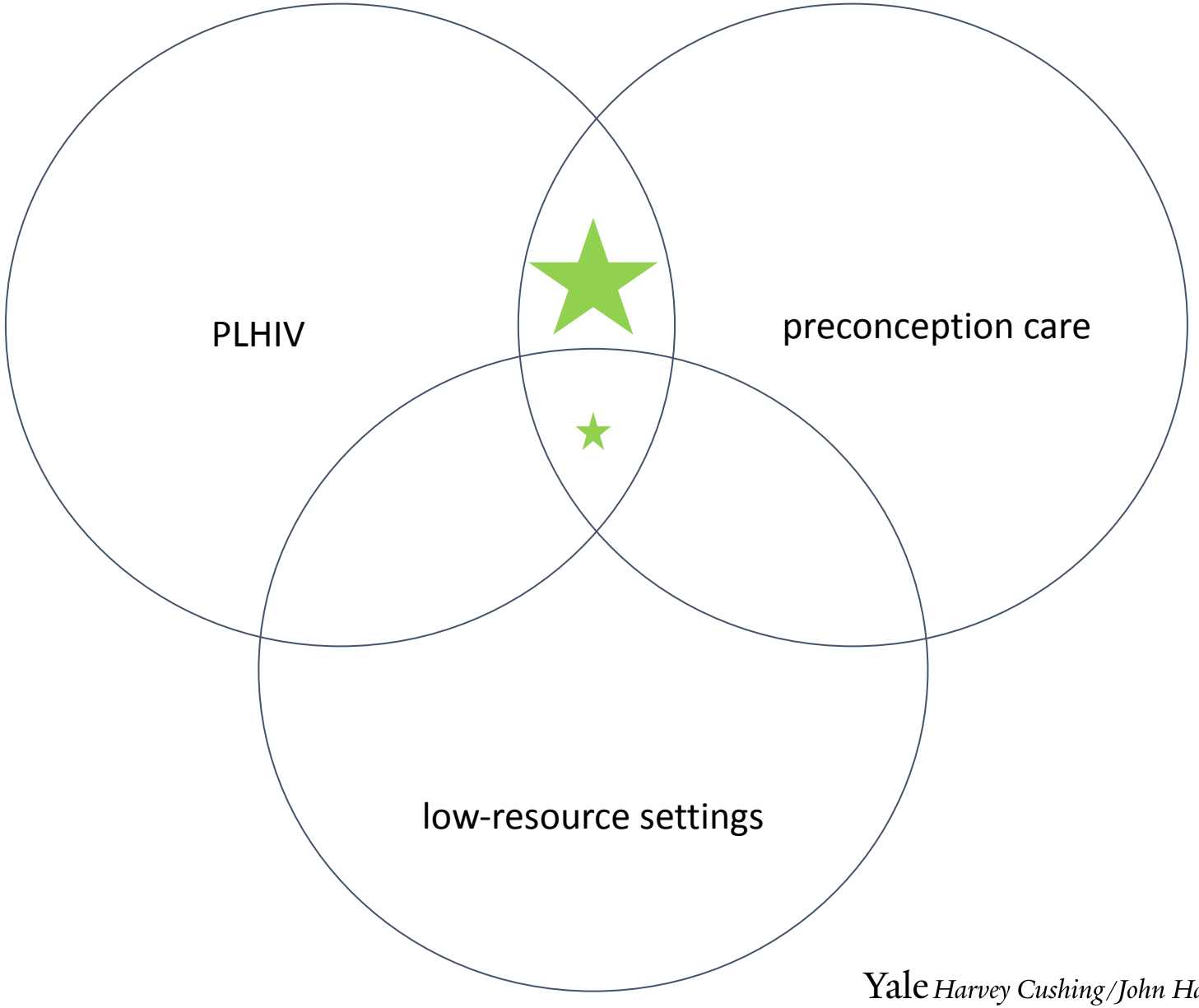
Research Question:

What preconception care interventions exist for people living with HIV (PLHIV) in low-resource settings?

Create a concept table of search terms

	Keywords (database will look for these keywords in the field you specify– for example, title/abstract or all fields)
Population	PLHIV
Concept	preconception care
Context	low-resource settings

Note: The context or outcome may not always be a part of your search, but rather, the lens for how you will read and interpret the literature on your population + concept


PLHIV
preconception care
low-resource settings

Search with subject headings

Subject headings differ by database!

	Keywords	MeSH* (database is looking for papers that have been assigned to this category)
Population	PLHIV HIV “human immunodeficiency virus”	
Concept	preconception fertility	preconception care
Context	“low resource” “low income”	

*MeSH = Medical Subject Headings used in PubMed databases

Preparing to combine concepts

Your search will be more exhaustive if you search with as many relevant keywords and subject headings (SHs) as possible

	Keywords	MeSH*
Population	**combine all terms of the same row (keywords & SHs) with OR and place in parentheses**	
Concept		
Context		



combine concepts with 'AND'

Put it all together

For this example, choose ‘title/abstract’ or ‘MeSH Terms’ as the search field in PubMed and build the search bit by bit, or type it out like so

(PLHIV[title/abstract] OR HIV[title/abstract] OR “human immunodeficiency virus”[title/abstract]) AND

(preconception[title/abstract] OR fertility[title/abstract] OR preconception care[MeSH Terms]) AND

(“low resource”[title/abstract] OR “low income”[title/abstract])

In many databases…
“quotation marks” are for exact phrases
truncation* is for searching a term that may have alternate endings
(parentheses) are for grouping like terms of the same concept
Boolean operators such as AND/OR/NOT combine concepts in a search string

History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#4	•••	>	Search: **#1 AND #2 AND #3** Sort by: **Publication Date**	38	10:46:40
#3	•••	>	Search: **("low resource"[title/abstract] OR "low income" [title/abstract])** Sort by: **Publication Date**	57,300	10:46:25
#2	•••	>	Search: **(preconception[title/abstract] OR fertility[title/abstract] OR preconception care[MeSH Terms])** Sort by: **Publication Date**	113,809	10:46:16
#1	•••	>	Search: **(PLHIV[title/abstract] OR HIV[title/abstract] OR "human immunodeficiency virus"[title/abstract])** Sort by: **Publication Date**	375,134	10:45:45

Showing 1 to 4 of 4 entries

Search techniques: before the search

- **Building blocks** - divide research Q into parts/concepts → PIO (population, intervention, outcome)
  - individual search lines for each concept which you can combine and experiment with (see previous slide)
  - you might consider using searching different fields (title/abstract vs. title vs. all fields) for different lines
- **Simple strategy** (AKA quick-and-dirty or easy searching) - select a database, divide a research Q into parts/concepts (similar to the way you approach the building blocks method), but compose a simple query using your terms for each concept linked by AND/OR
  - all in one line!
  - modify search as needed based on results

(Marchionini, G, 1995).

Revise and repeat.

Precision & recall

(Quality vs. Quantity)

Search techniques: during/after the search

- **Pearl growing** - begin with a specific document that is known to be relevant and use the characteristics of that document to grow a set of related documents
  - Scopus database - related documents feature
- **Citation chaining** - find a relevant, well-written article and mine its reference list
  - Web of Science database - citation network feature

(Marchionini, G, 1995).

Your turn!

Fill in search terms for a research question you have in mind

	Keywords
Population	
Concept	
Context	

Create an account

in your favorite databases and save your search history.

Run a search in more than one platform.

Databases differ by coverage (subjects/disciplines, time period, language(s), etc.) and searching capabilities (filters available, subject headings or not, save/export options, etc.).

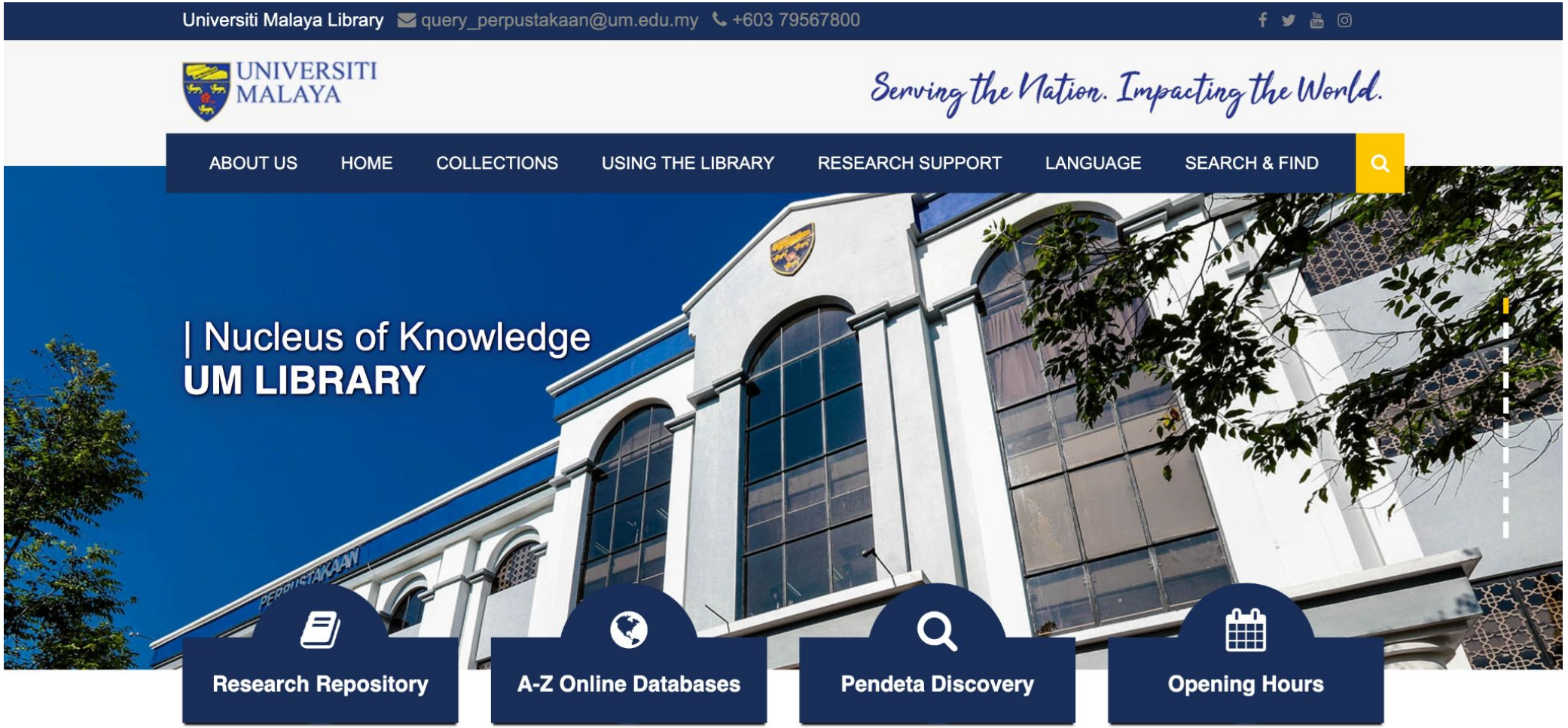
Keep a written search log.

Try your best to access the full text

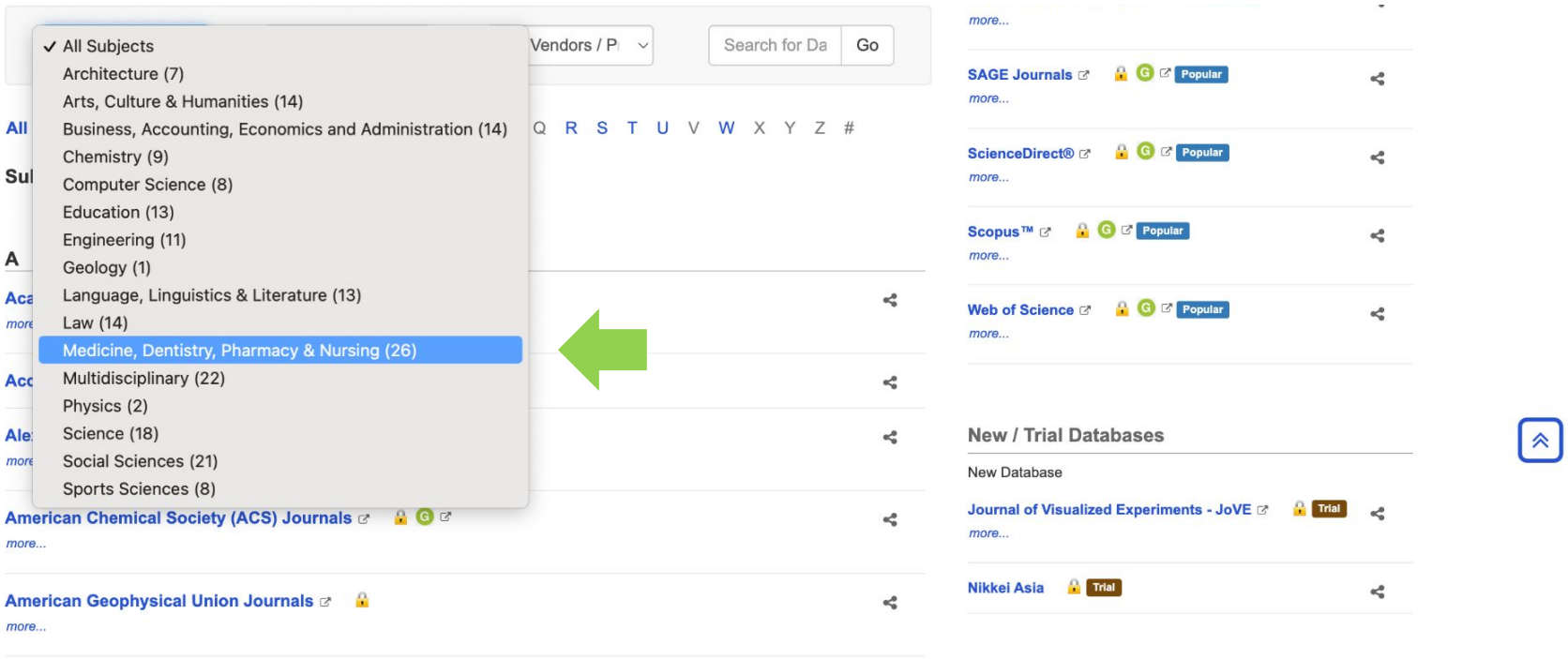
full text = the entire article

- Universiti of Malaya subscriptions
  - A-Z databases
    - Medicine, dentistry, pharmacy & nursing subcategory

Universiti of Malaya Library databases A-Z

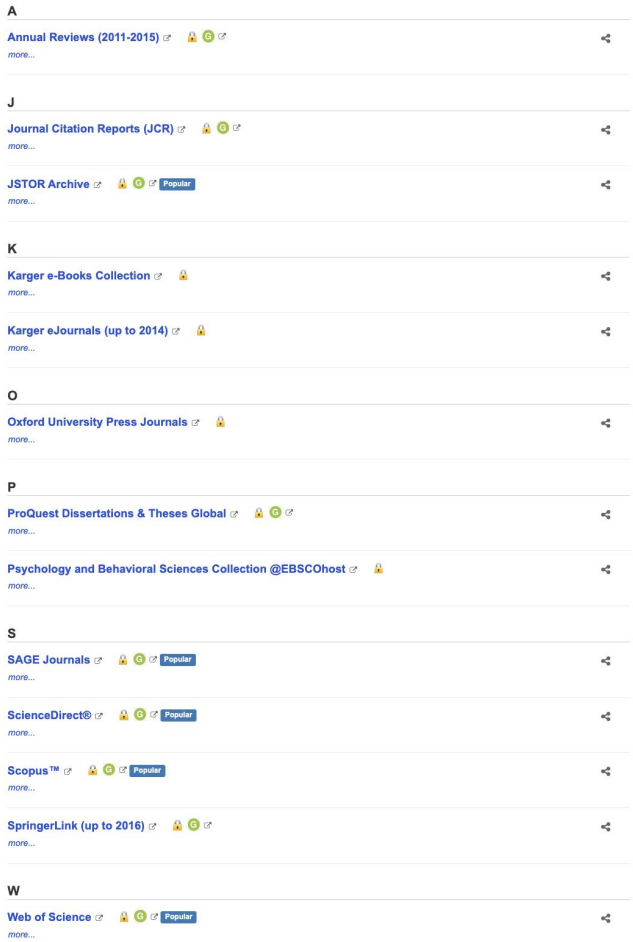


All subjects or a particular subject



Databases for medicine, dentistry, pharmacy & nursing

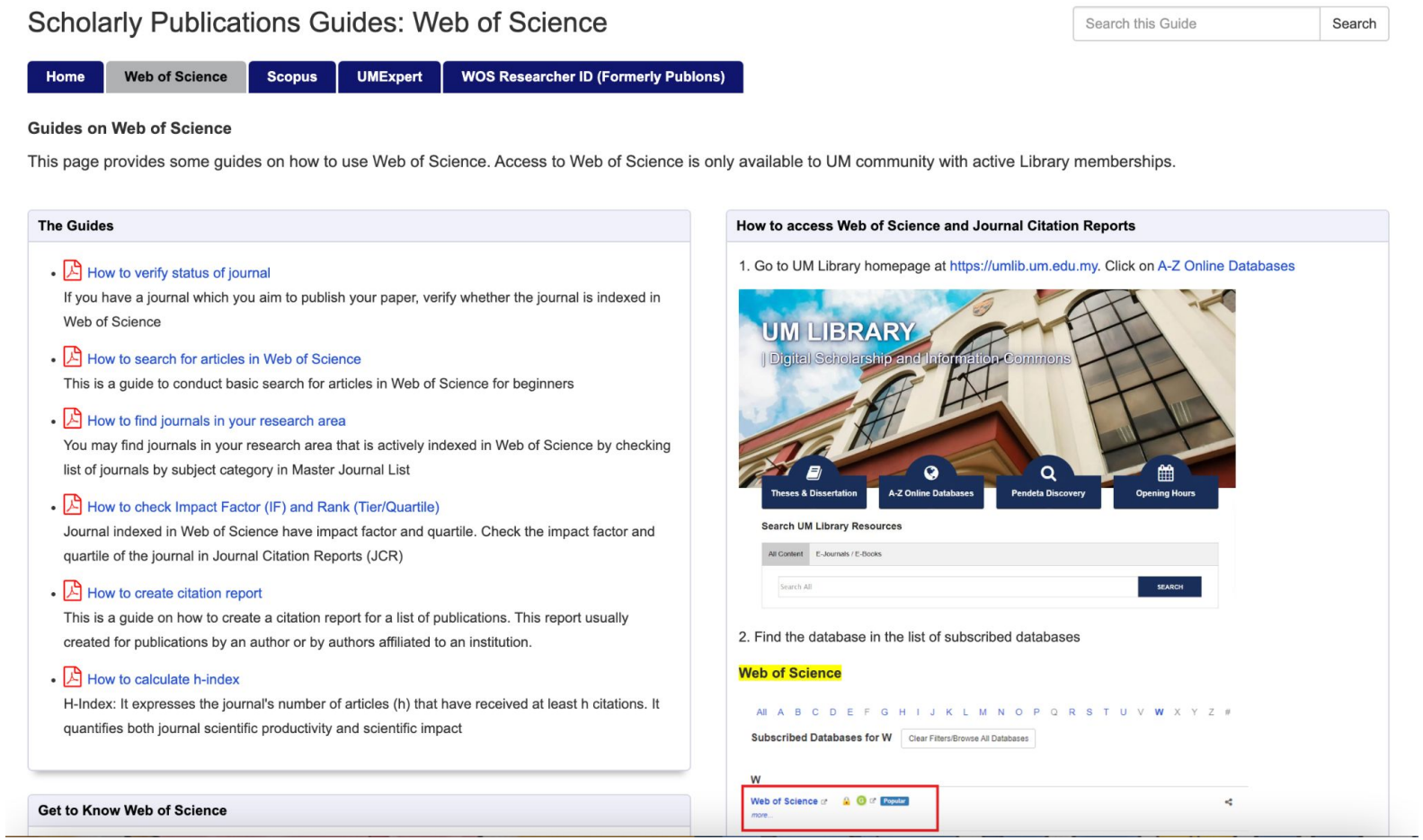




Practice searching in Web of Science

Refer to the [UM Web of Science Library Guide](#) for guidance

Note: this database **does not** contain SHs!



Practice searching in PubMed

- Create a myNCBI account
- Use the ‘free full text’ filter
- Learn more about automatic term mapping
  - PubMed attempts to translate your keyword search terms to MeSH terms where applicable, but only if you search at the all fields level and your terms are not enclosed in “quotation marks”
- Or look up MeSH terms in the MeSH database before searching
- Remember: a narrative literature review does not require an exhaustive search, so you can stick with just keywords if you prefer

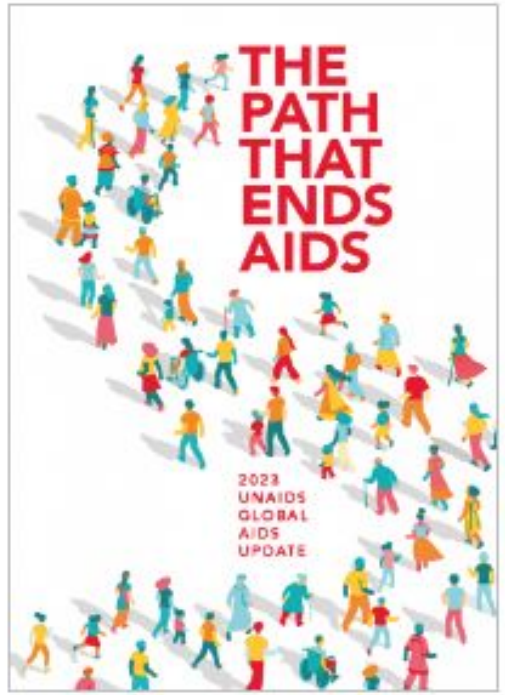
Access the full text: continued

- In databases, such as Web of Science
  - Button for ‘full text at publisher’ (availability will depend on library journal subscriptions)
  - Button for ‘Look up full text at Google Scholar’ (this option will only work if the article is available for free, otherwise known as ‘open access’)
- PubMedCentral (PMC) is the open access (OA) repository of PubMed articles
- Other OA pathways
  - OA Button
  - UnPaywall
  - Preprint servers
  - Email the author(s)

How do I find grey literature?

Ask Yourself…

- Who are the experts/leaders on this topic?
  - Community/state/national/global levels
  - What professional associations exist?
- Tip: try a Google search or an advanced Google search



The path that ends AIDS: UNAIDS Global AIDS Update 2023

World Health Organization
https://www.who.int › europe › teams › hiv-aids

Policy guidance by HIV intervention area

Effective HIV prevention interventions include **condom use, provision of clean injecting equipment, opioid substitution therapy**, treatment of sexually ...

Groups listed on the Malaysian Ministry of Health website - HIV/AIDS subpage

AIDS/STD Section
Disease Control Division
Ministry of Health
Level 4, Block E10, Parcel E
62518 Putrajaya
Tel : 03-88834387
Fax : 03-88834285 Website : http://dph.gov.my/aids

The Malaysian AIDS Council
No. 12, The Boulevard Shop Office
Jalan 13/48A, Off Jalan Sentul
51000 Kuala Lumpur
Tel : 03 – 4045-1033
Fax : 03 – 4042-6133
Email : contactus@mac.org.my
For counselling: Toll free line at 1-800-88 18 48 or email : counseling@mac.org.my

Association of Malaysian Compassionate (PENGASIH)
Tel : 03 – 6201 3179 / 0287
Fax : 03 – 6201 3013 / 5940
E-mail : ppm@pengasih.net Website : http://www.pengasih.net

Community AIDS Service Penang (CASP)
Tel : 04 – 229 9566 / 7412
Fax : 04 – 228 1624
E-mail : aidspg@tm.net.my

Federation of Family Planning Associations Malaysia (FFPAM)
Tel : 03 – 5633 7514 / 16 / 28
Fax : 03 – 5634 6638
E-mail : ffpam@po.jaring.my or ffpam2@tm.net.my

Islamic Medical Association of Malaysia (PPIM) wakekl@tm.net.my
Tel/Fax : 03 – 9172 1533
E-mail : abdhaq@pl.jaring.my or jeffrey@mail.hukm.ukm.my
Website : http://www.ppim.org.my

PT Foundation (PTF) Tel : 03 – 4044 4611 Fax : 03 – 4044 4622 E-mail: hishamhu@csd.tnb.com.my
Sarawak AIDS Concern Society (SACS)
Tel : 019 – 857 9423
Fax : 03 – 4044 4622
E-mail : khaliku@normah.com

Women and Health Association of Kuala Lumpur (WAKE)
Tel : 03 – 2692 6861
Fax : 03 – 2692 6877
E-mail : wakekl@tm.net.my

Kelantan Patient Intermediary Association (SAHABAT)
Tel : 09 – 7472 119 / 012-9620656
Fax : 09 – 7502 504

The Community Guide

HIV, STIs and Teen Pregnancy

Print

An estimated 1.1 million people in the United States are living with HIV (CDC), and nearly 1,700 teens ages 15 to 17 give birth
). In 2017, there were 1.7 million cases of chlamydia, more than 500,000 cases of gonorrhea, and more than 30,000 cases of syph

Community Preventive Services Task Force Findings



HIV Prevention: Digital Health Interventions to Improve Adherence to I Exposure Prophylaxis

December 1, 2021

CPSTF recommends digital health interventions to increase adherence to HIV PrEP. Read e systematic review.



HIV Prevention: Partner Services Interventions to Increase HIV Testing

July 1, 2021

CPSTF recommends partner services interventions to increase HIV testing. Read effectiveness evidence from systematic review.

Summary Table

This summary of CPSTF findings to prevent AIDS, STIs, or teen pregnancy can be used as a reference, included in presentations, or shared with colleagues.

Implementation Resources

Teen Pregnancy Prevention Evidence Review

The U.S. Department of Health and Human Services sponsors systematic reviews of the teen pregnancy prevention research literature to identify programs with evidence of effectiveness in reducing teen pregnancy, sexually transmitted infections and HIV, and associated sexual risk behaviors. Identified programs reflect a variety of approaches in the field.

Presentations and Promotional Materials

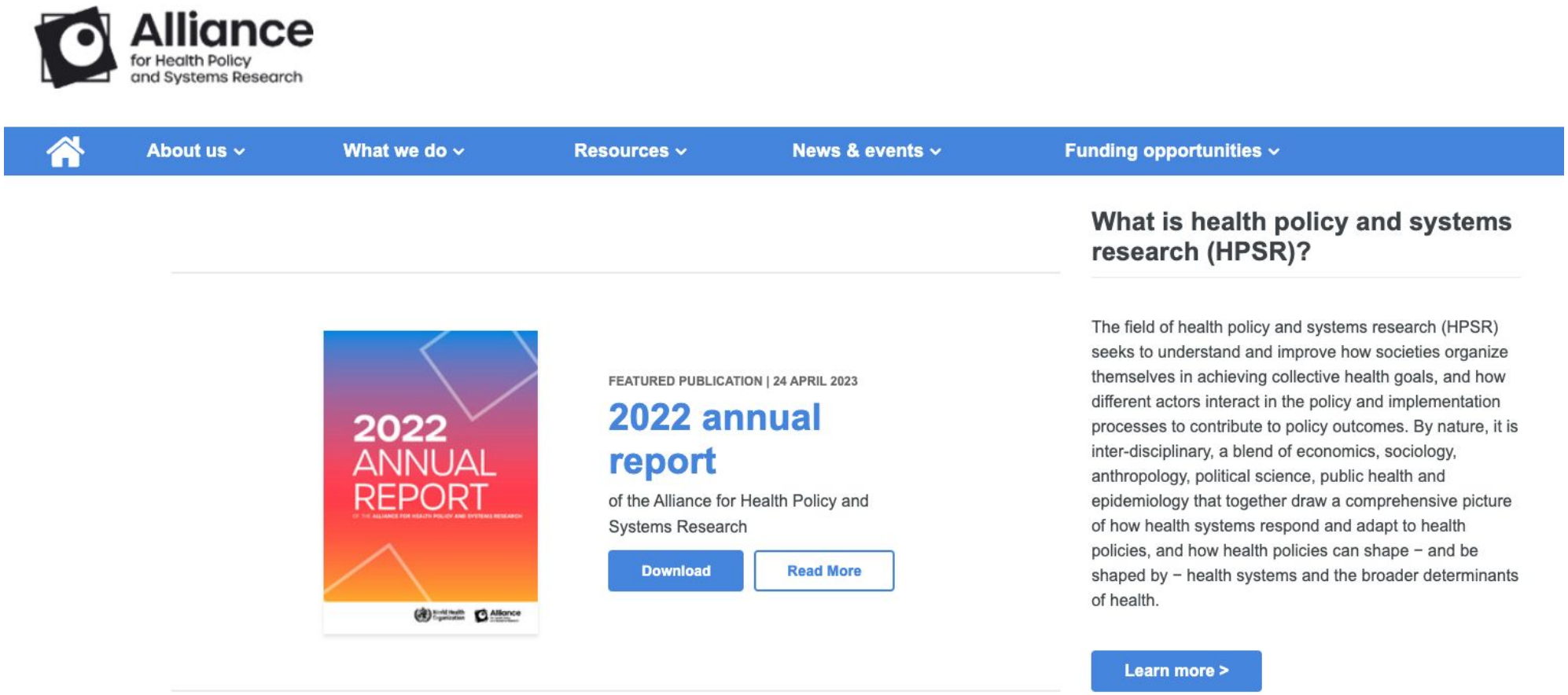
Use these materials to share information about the CPSTF findings and Community Guide products with your community.

What Works Fact Sheets

What Works Fact Sheet: HIV, STIs, and Teen Pregnancy

This fact sheet summarizes CPSTF findings for intervention approaches to prevent HIV, STIs, and teen pregnancy.

Alliance for Health Policy and Systems Research



Step #2

SAVE

Store articles of interest in a citation manager.

UM Library Guide on downloading & using EndNote

In the database, select references (one or many), then look for the option, ‘save,’ ‘export,’ or ‘send to.’

EndNote & Zotero

EndNote

- Finds duplicate references
- Microsoft Word integration

Zotero

- Open source (free) software
- Group libraries for collaborating
- Google Docs integration
- Web browser extension for auto-export of citations

Step #3

READ/ANNOTATE

What is annotation?

the process of summarizing and evaluating

(Annotated Bibliographies, 2021)

Consider matrix note-taking as you read

Descriptive/informational annotation

- who
- what
- why
- theoretical framework(s)
- methods
- findings
- strengths/weaknesses
- bias

Analytical/critical annotation

- who/what/why/etc. to some degree
- take notes on the readings in the context of your particular research questions

Critical appraisal

(Hicks & Roberts, 2018)

Consider an annotated bibliography

- **annotated bibliography** = a summary and/or evaluation of each source in a reference list
- Suggested workflow
  - Read papers and take note of the who/what/why/etc. in a Microsoft Excel Spreadsheet or Google Sheet (tabular or matrix method)
  - Use a word processing software like Microsoft Word or Google Docs to thoughtfully summarize the notes from your spreadsheet into one paragraph per source (max 15 sentences/300 words)
- These paragraphs are great building blocks for writing a literature review/background section of a manuscript

Parting advice

- Determine your information need(s)
- Search on more than one platform
  - for scholarly literature: begin by searching keywords pertaining to your research question in health science databases
  - for grey literature: begin by brainstorming who you think the creators of the information might be (leaders in this area, community organizations, etc.)
- Meet with a librarian to discuss your information needs and literature searching plans
- Save sources to a citation manager
- Take thoughtful notes on what you read, so that you are prepared to write, meet with stakeholders, etc.

Questions?

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Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K. (2005). Realist review-a new method of systematic review designed for complex policy interventions. *Journal of health services research & policy*, *10*(1_suppl), 21-34.

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