



LITHUANIAN UNIVERSITY
OF HEALTH SCIENCES

Lecture

Becoming a Physician Researcher

Part 2

How to search the literature?

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Lecturer



Where to search medical literature?

Table 1

SOURCES OF MEDICAL LITERATURE

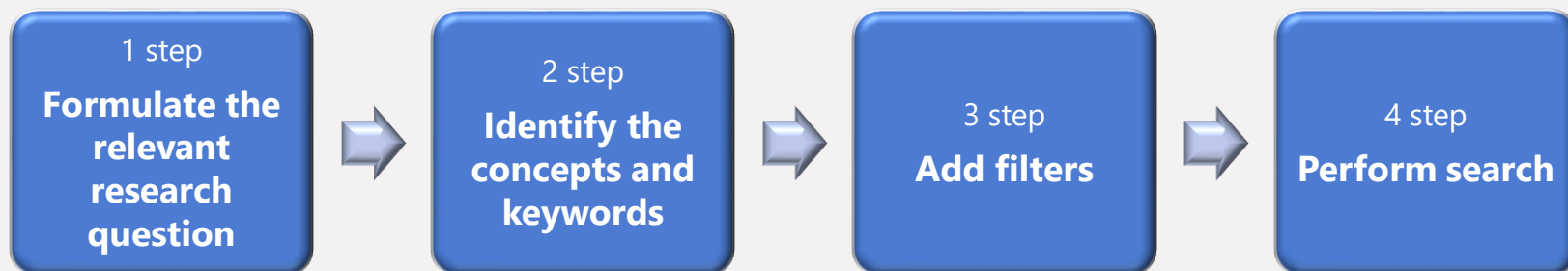
eTextBooks	eJournals	Anatomy database	Clinical databases	Veterinary databases	Databases of various specializations	Journals in Lithuanian
Access Medicine	PubMed	Acland Anatomy	UpToDate	Cabi Animal Science Database	MedOne Neurosurgery	Laboratorinė medicina
AccessPharmacy	BMJ Journals	Anatomy.tv	Cochrane Library	Cabi VetMed Resource	Micromedex	Lietuvos akušerija ir ginekologija
Cambridge Core eBooks	JAMA	Visible Body	Nursing Reference Center Plus	Vetstream	Natural Medicines	Lietuvos bendrosios praktikos gydytojas
Oxford Medicine Online	New England Journal of Medicine		ClinicalKey		Neofax and Pediatrics	Pulmonologija ir alergologija
Wiley Online books	Oxford Journals					Stominfo

Literature

1. <https://login.ezproxy.dbazes.lsmuni.lt/menu>.

How to search medical literature?

The steps to performing literature search



How to search medical literature?

Table 2

Formulating the research question as per PICO(T) format

Components of PICO(T)	Description
P -population	Refers to the study population or subjects who would be included in the study
I -intervention	Refers to the specific intervention (investigation/treatment modality) which will be administered to the study population and whose impact would be studied
C -control	Refers to the reference group which would be used for comparison of the differences in outcome with the intervention
O -outcome	Predefined outcomes on the basis of which effectiveness of the intervention will be measured
T -time	The duration of data collection

Literature

1. Jha R, Sondhi V, Vasudevan B. Literature search: Simple rules for confronting the *unknown*. Med J Armed Forces India. 2022 Sep;78(Suppl 1):S14-S23. doi: 10.1016/j.mjafi.2022.07.009. Epub 2022 Aug 30.

4

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Table 3 – Steps to performing PubMed search (the details of each step are further elucidated in Table 4).

Steps	Description	Example
1	Formulate the relevant research question	Are antibiotics efficacious in management of sore throat? <i>PICO format:</i> <i>Patients:</i> Individuals with sore throat <i>Intervention:</i> antibiotics administration <i>Control:</i> Did not receive antibiotics <i>Outcome:</i> Efficacy in reducing symptoms
2	Identify the concepts and associated keywords	
2a	Identify the concepts	Concept 1: antibiotics Concept 2: sore throat
2b	Identify the key words associated with each concept	Identify the keywords associated with concept 1: “antibiotics”; for example: antibiotic OR anti-bacterial agents OR antimicrobial agents Identify the keywords associated with concept 2: “sore throat”; for example: Pharyngitis OR Nasopharyngitis OR Tonsillitis OR “inflamed throat”
3	Prepare for PubMed search	
3a.	Add MeSH terms for each concept	MeSH term for Concept 1: MeSH term for antibiotics: “anti-bacterial agents”[MeSH Terms] MeSH term for Concept 2: MeSH term for sore throat: “pharyngitis”[MeSH Terms]
3b.	Add the Boolean Operators, truncations where applicable and then add double quotes across multiword phrases	For example for concept 1: antibiotic* OR “anti-bacterial agent*” For example for concept 2: Pharyngit* OR Nasopharyngit* OR rhinopharyngit* OR Tonsillit* OR “inflamed tonsil*”
3c.	Merge the keywords and MeSH terms for each concept	Concept 1: antibiotic* OR “anti-bacterial agent*” OR “anti-bacterial agents”[MeSH Terms] Concept 2: Pharyngit* OR nasopharyngitis OR rhinopharyngitis OR tonsillitis OR “inflamed throat” OR “inflamed tonsils” OR “infected throat” OR “infected tonsils” OR “sore throat” OR “pharyngitis”[MeSH Terms]
3d.	Perform search for individual concepts and then merge the two concepts using AND	(antibiotic* OR “anti-bacterial agent*” OR “anti-bacterial agents”[MeSH Terms]) AND pharyngitis OR nasopharyngitis OR rhinopharyngitis OR tonsillitis OR “inflamed throat” OR “inflamed tonsils” OR “infected throat” OR “infected tonsils” OR “sore throat” OR “pharyngitis”[MeSH Terms]

Example

Steps to performing PubMed search

Literature

1. Jha R, Sondhi V, Vasudevan B. Literature search: Simple rules for confronting the *unknown*. *Med J Armed Forces India*. 2022 Sep;78(Suppl 1):S14-S23. doi: 10.1016/j.mjafi.2022.07.009. Epub 2022 Aug 30.

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“Scientific research is one of the most exciting and rewarding of occupations”.

Frederick Sanger

British biochemist who received the Nobel Prize in Chemistry twice

13 August 1918-19 November 2013

The lecturer contacts

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