



Medical Information Retrieval: The Basics

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Listening to a Librarian



Because

"**H**alf of what you are taught as medical students will in 10 years have been shown to be wrong. And the trouble is none of your teachers knows which half."

Dr. Sydney Burwell [1956]

Because (Cont'd)



The cost of finding so much money is the same as the cost of finding no information



Because (Cont'd)

How much of this information can be trusted???

Check the Sources of Information....Question

...An important message from the Maker of....

Popular Arthritis Pain Relievers Linked to Medical Problems

Leading Cause of Death in Women Linked to Heart Disease

Prescription Pain Relievers Linked to Opioid Abuse

DA Studies Show Link Between Weight Gain and Prescription Pain Relievers

Result of... Misuse

Death After... Increased Risk

Several Cases of... Lawyers for

...Cause Breast Cancer in Clinical Trials

Tobacco Companies Just Released



The coronavirus is the first true social-media
“infodemic”

Information Today, Inc. Corporate Site | KMWorld | CRM Media | Streaming Media | Faulkner | Speech Technology | Unisphere/DBTA

Information Today, Inc.

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Back Index Forward

Johns Hopkins' Tragedy: Could Librarians Have Prevented a Death?

by [Eva Perkins](#)

Posted On August 7, 2001

In a tragic situation that could have been averted, Ellen Roche, a healthy, 24-year-old volunteer in an asthma study at Johns Hopkins University, died in June because a chemical she inhaled led to the progressive failure of her lungs and kidneys. In the aftermath of this loss, it would appear that the researcher who conducted the experiment and the ethics panel that approved it allegedly overlooked numerous clues about the dangers of the chemical, hexamethonium, given to Roche to inhale.

NewsBreaks
& The Weekly News Digest

computers in libraries 2020
MARCH 31 - APRIL 2
HYATT REGENCY CRYSTAL CITY, Arlington, Virginia

Register today!

  https://www.biospace.com/article/harvard-brigham-and-women-s-hospital-seek-retraction  80%   

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Harvard, Brigham and Women's Hospital Seek Retraction of 31 Articles With Falsified Data

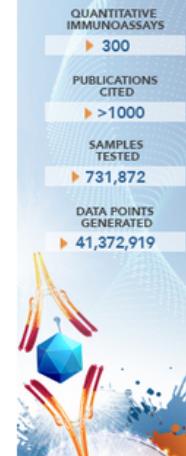
Published: Nov 23, 2018 | By Alex Keown

Original publication date: October 15, 2018

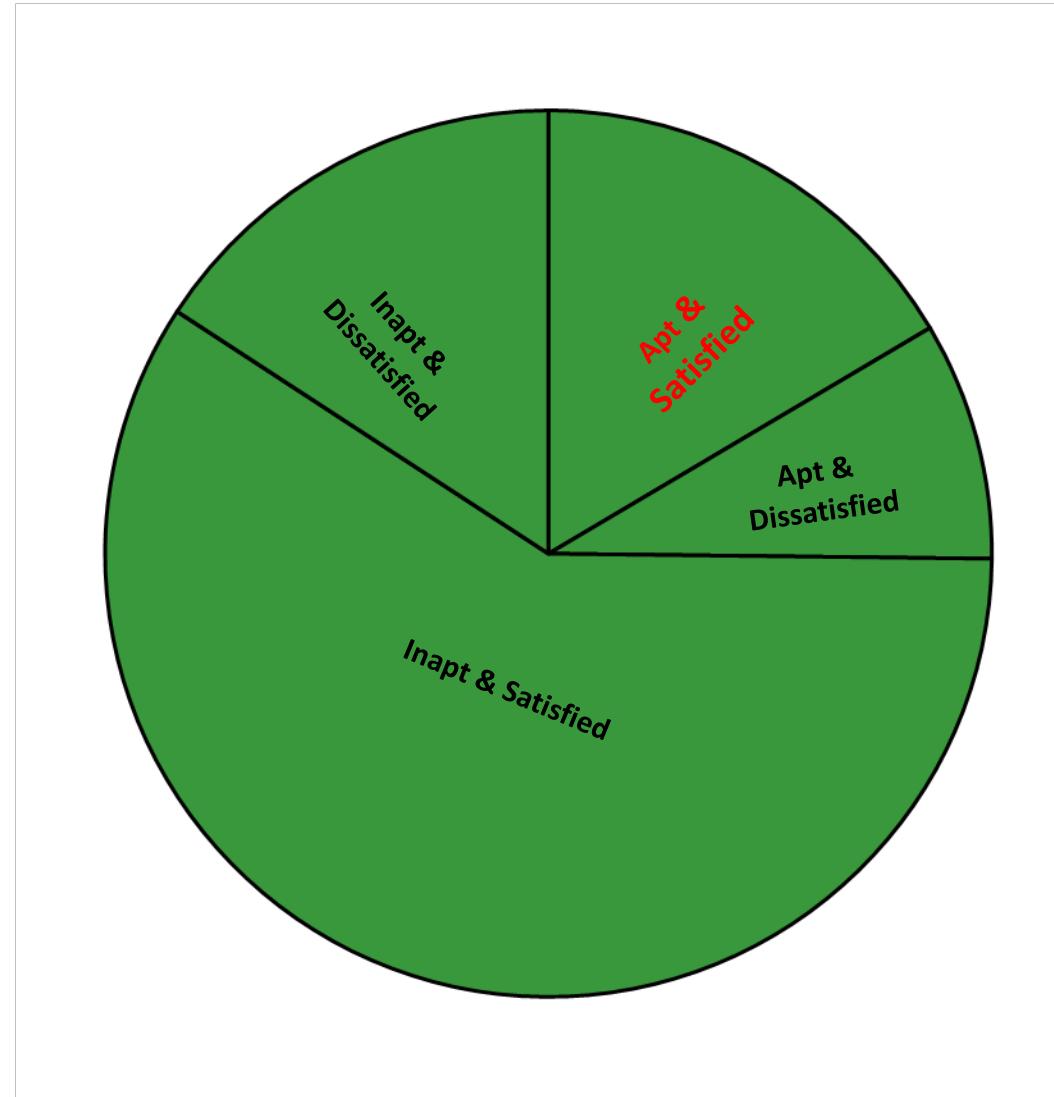


Gordon Hall at the Quadrangle of Harvard Medical School. Credit: ThePhotosite / Shutterstock.com

Two prestigious institutes are **calling for the retraction of 31 articles** from



Because (Cont'd)
User Categories

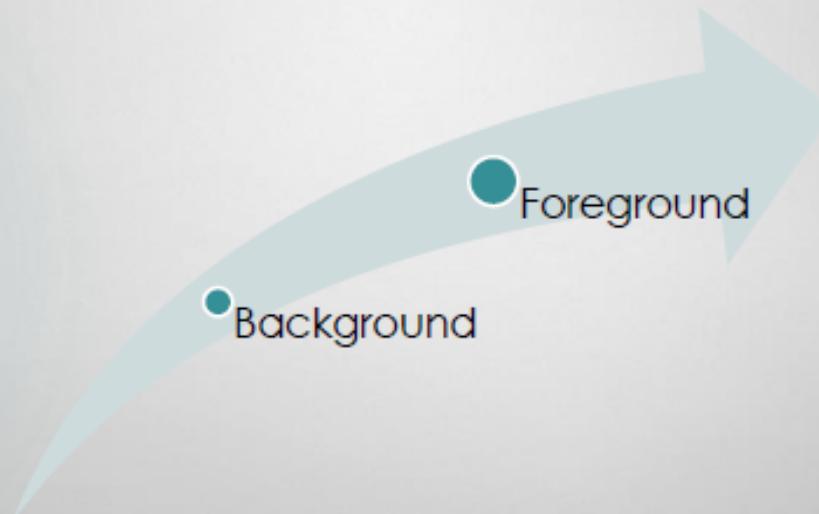


It is no longer your job to know everything, even in your chosen specialty;

It **IS** your job to be able to find the information as and when your patient needs it...

Types of Medical Questions

- ▶ Basic-General-Novice Researcher BACKGROUND
- ▶ Advances- Focused-Expert Researcher FOREGROUND



Looking for Literature-How to go about it...

- What is a Database?
- What are the different types of databases?
 Keyword databases **vs.** Mesh databases
 - Mentioning **vs.** talking about/indexing



[Diseases Category](#)

[Cardiovascular Diseases](#)

[Heart Diseases](#)

[Myocardial Ischemia](#)

Myocardial Infarction

[Anterior Wall Myocardial Infarction](#)

[Inferior Wall Myocardial Infarction](#)

[Non-ST Elevated Myocardial Infarction](#)

[Shock, Cardiogenic](#)

[ST Elevation Myocardial Infarction](#)

- Have to include other **synonyms** **vs.**
- Dumb/silly/irrelevant **vs.** relevant
smart efficient (both effective and timely)
- **Everywhere vs. Bibliography**
- What is a Controlled Vocab? (Here “Medical Subject Heading”-**Mesh**?)
- What are the features of Bibliographic Medical databases?

PubMed: Introduction

- PubMed, a bibliographic database dating back to early 1900, indexes
 - around 5700 international journals of medicine & medical sciences
- PubMed now also contains:
 - around 800 e-books and reports that are free to everyone.
 - links to free genetics, chemistry, environmental health, toxicology databases.
- PubMed is a **free resource** that is developed and maintained by the National Center for Biotechnology Information ([NCBI](#)), at the U.S. National Library of Medicine ([NLM](#)), located at the National Institutes of Health ([NIH](#)).

Google Scholar

Pros	Cons
<ul style="list-style-type: none">•Familiar Google interface - easy to search•Very broad coverage•Integrated citation information and author profiles•Results can be linked to the library collection (Open URL/ Article Linker)	<ul style="list-style-type: none">•Limited search capabilities and very large result sets make precision searching impossible<ul style="list-style-type: none">• No subject headings• Limited sorting and filtering options• Algorithm-based (takes the control out of the searcher's hands)•Not clear how "scholarly" is defined (leads to some questionable results)•Lacks the focus and quality control present in other scholarly databases

Google Tips

- Boolean AND by default
- Insert OR
- Automatic truncation
- “phrase”
- Star * is one word within a phrase “infant * mortality”
- To ask Google to search Pubmed, at the end put **site:nih.gov**

allintitle: coronavirus Lebanon 13,300 results

allintitle: coronavirus lebanon site:.org 1,160 results

allintitle: coronavirus lebanon site:.lb 13 results

intitle: coronavirus site:.lb 36 results

- To locate librarians’ guides, at the end put **libguides**

PubMed vs. Google Scholar

PubMed	Google Scholar
Searches only bibliographic data and MeSH	Searches in addition the article full-text
Uses controlled vocabulary: MeSH	No controlled vocabulary
Searches medical/health related topics	Searches broad field of science
Provides search history and ability to combine sets with Boolean operators	No search history, search has to be done in one line
No limit for search query characters	Search query limited to 256 characters
Automatic term mapping to MeSH	Possible automatic searching for synonyms
Can limit search to a number of fields	Can limit search to title and author fields only
Has a large selection of predefined limiting options	No prequalified limits like human, age groups, systematic reviews etc...
Can download a number of records directly to a citation management tool	Can download one citation at a time, or gather them in "My Library", then export the whole library

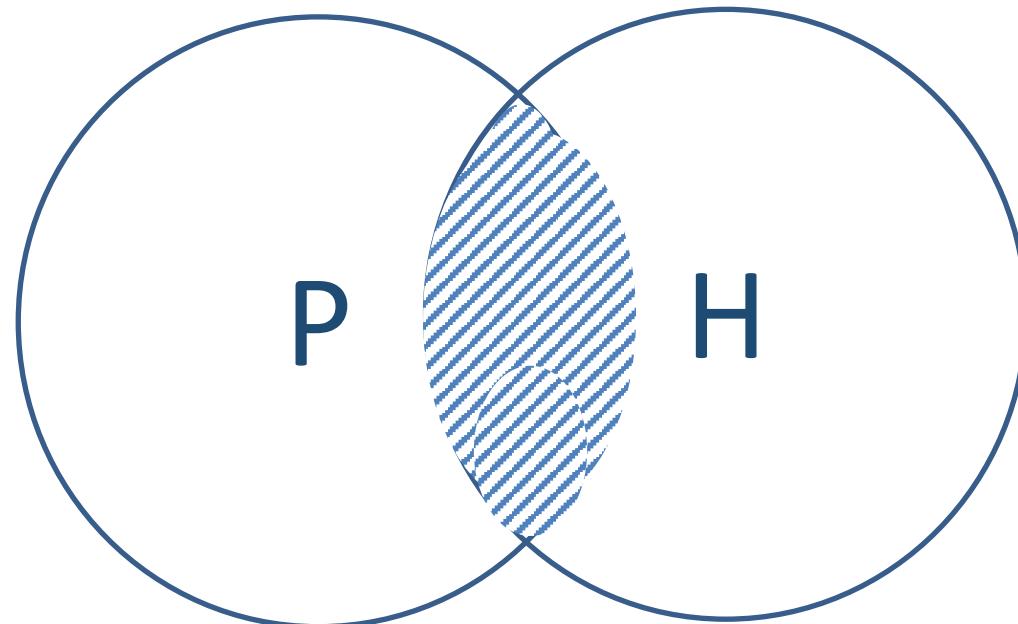
Searching Foreground questions



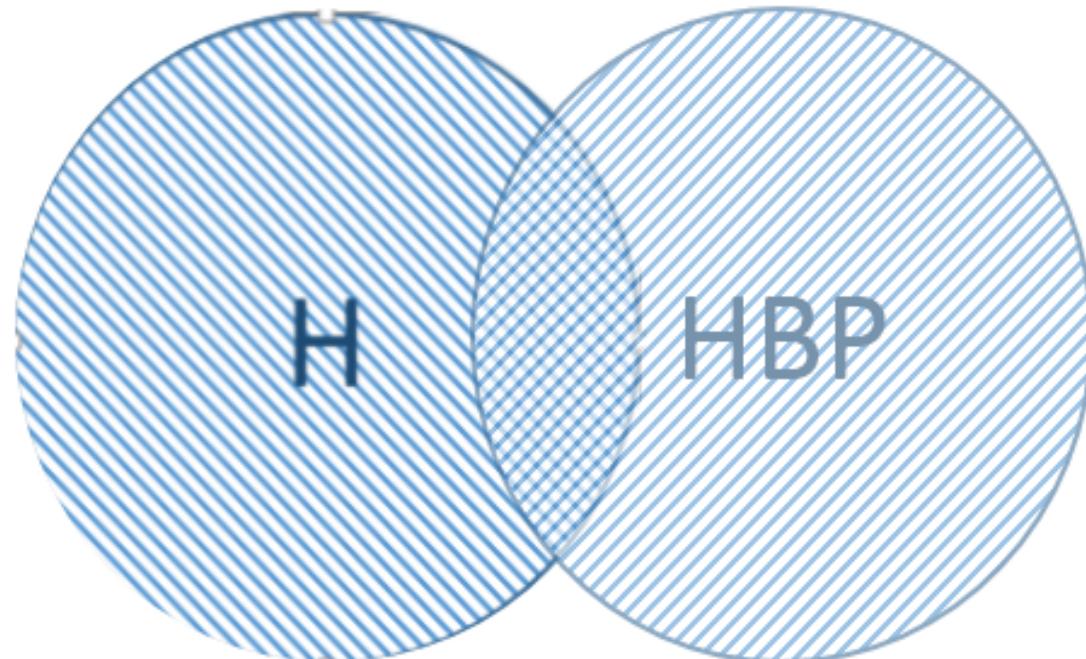
Steps on going about Foreground question

- Break down the topic into the concepts
- Search each concept for Meshs
- Combining using Boolean

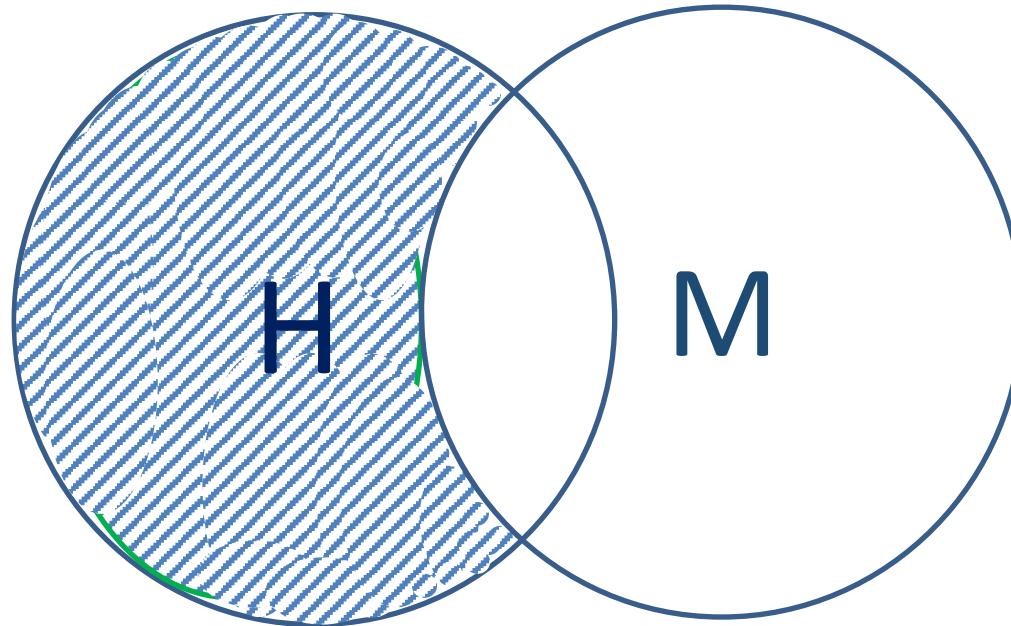
BOOLEAN OPERATORS



P AND H



H OR HBP



H NOT M

H AND F

X (P AND H) OR HBP

✓ P AND (H OR HBP)

Does MMR cause autism?



Does Cocaine cause heart attack?



Kahoot

Serology for H. pylori | Choosing "breast cancer" - Google Search Kahoot!

https://play.kahoot.it/v2/gameover?quizId=9fc3caf7-a2b0-4e96-981c-07819be1a11c

March 19, 2020

LA

TT

hoo

4006
5 out of 6

111537

Ka

3986
5 out of 6

t!

3728
4 out of 6



Beyond PubMed

[Evidence Update](#)

[Nursing+](#)

[Knowledge Translation +\(KT+\)](#)

[EBM Journal-Dynamed](#)

Beyond PubMed- Cont'd



An informed patient is a better patient.

A reliable database done by National Institute of health in layman language that has some Arabic translated manuscripts. It helps the patient understand his/her disease better and some drug interactions.

Beyond PubMed- Cont'd

[Choosing Wisely](#)

Overdosed Practice...to an end

Beyond PubMed- Cont'd

- [PubMed® Special Queries: Directory of Topic-Specific PubMed Queries](#)
- [Agency for Healthcare Research & Quality](#)
- [National Institute for Health & Care Excellence](#)
- [Global Index medicus](#)
- [Zotero](#)
- [ECRI Guidelines](#) (requires free registration)
- [Etc](#)

Back to the question “Why listening to a Librarian”



Well

Google vs



**'Google can bring you back 100000 answers,
a Librarian can bring you back the right one'**

Neil Gaiman

Still Confused?



This is just a sample of what I can help you with...

- Advanced searching (Across different databases)
 - Embedded in your courses, Webinar
 - One-on-one consultations
 - Performing Systematic Reviews, Scoping
 - Where to Publish? Which journal to select
- Finding and providing articles, book chapters, books
- More about Drug Information, Guidelines, Calculators, etc..
- How to use Endnote and Citation management Tools
 - **How to Boost your research**
 - And more



BUT REMEMBER

Stay Calm and Ask A

For further questions, do not hesitate to contact me
on:

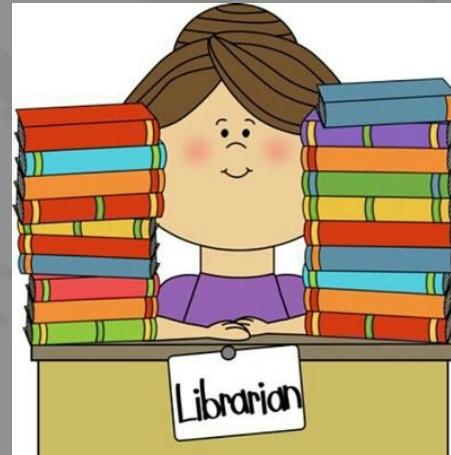
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[Libguides](#), [YouTube](#)

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Thank you,