PubMed – the Einstein method

October 8, 2018
Introductions
PubMed – the Einstein Method

- First name, family name
- Country of origin (as you define it)
- Most famous person that you ever met is ....
"Education is not the learning of facts, but the training of the mind to think."
-Albert Einstein
Searching made simple but still smart

“Make everything as simple as possible, not simpler.”

-Albert Einstein
Simple search PubMed interface
Improving online access to medical information for low-income countries.

Aronson B.


PMID: 14999107 [PubMed - indexed for MEDLINE]
PubMed labs

What is PubMed Labs?

PubMed Labs is a test site where we are experimenting with new features and tools that eventually may be incorporated in PubMed, in their current or a revised form based on the input we receive. Please try the site and let us know what you think.
MEDLINE database

http://pubmed.gov

- National Library of Medicine (USA).

- A bibliographic database containing more than 28 million references.

- Indexes over 5500 biomedical journals; coverage is worldwide, but (86%) of the records are from English-language resources.

- Covers medicine, nursing, dentistry, veterinary medicine, health-care systems and the pre-clinical sciences, as well as microbiology, delivery of health care, nutrition, pharmacology and environmental health.

- New material is added and the database is updated daily basis.
Two types of searching

- Keyword
- Subject heading*
  - what I call the Einstein Method.

*Subject headings = standardized phrases describing main ideas.
Keyword Searching is so easy!

- But.....
Rat *

- Rat ational
- Rat e
- Ratifty
- Rat s
Use of truncation

- PubMed searches for only the first 600 variations of a truncated term.
  - If more than 600 variations (rat*), warning displayed to lengthen the root word.

- Truncation stops term mapping and explosion of a MeSH term.
  - Heart attack* will not map to the MeSH terms Myocardial Infarction, Myocardial Stunning, Shock or Cardiogenic.
Rat*
Stops at ratchin (term 600), thus missing rats

ratchin[All Fields].
MeSHing – behind the scenes
193 537 results
Different citations results
4414 versus 193 537

Truncation turns off the search for related MeSH terms.
Truncation problems – check details

- "low income countr*" produces:

- **Low income countries** produces:
  - ("poverty"[MeSH Terms] OR "poverty"[All Fields] OR ("low"[All Fields] AND "income"[All Fields]) OR "low income"[All Fields]) AND countries[All Fields]

- Use instead "low income countries" OR "low income country"
Using Human Limit?
Global Information Full Text (GIFT)
http://intranet.who.int/homes/lnk/gifthinari/

GIFT & Hinari/Research4Life: Access to scientific publications

As of March 2018, WHO Library successfully negotiated for access to the Research4Life/Hinari content for WHO.

GIFT remains available with some important resources to WHO’s work on a subscription basis.

GIFT provides WHO staff worldwide online access to subscribed journals and databases in the medical and biomedical field, facilitating access to the latest and most valued scientific information.

Hinari/Research4Life is the world’s largest collection of online biomedical and health literature.

This public-private partnership provides free access to more than 50,000 online information resources to health institutions in low- and middle-income countries. Also available through Research4Life login area: AGORA, GARE, ARDI.

Guide access for WHO Regional Offices and WHO HQ
Guide access for Countries Offices

Email: gift@who.int

Trainings materials
The Lancet Psychiatry Commission on psychological treatments research in tomorrow’s science.

Holmes EA1, Ghaderi A2, Harmer CJ1, Ramchandani PG1, Cuijpers P3, Morrison AP4, Roiser JP5, Bandlow CL6, O’Connor RC7, Shafirn R8, Moulds M9, Craseke MG10.

Author information

PMID: 29452764 DOI: 10.1016/S2215-0366(17)30513-8

Publication type

LinkOut - more resources

Full text links

Save items

Add to Favorites

Similar articles

Changes in undergraduate clinical psychiatry teaching in Scotland since “Dr. [Scott Med J. 2008]

The nearly universal link between the age of past knowledge and tomorrow’s breakth [Sci Adv. 2017]

1969 revisited: reflections on Tomorrow’s community physician. [Int J Epidemiol. 2001]


Review The anatomy demonstrator of the future: an examination of the role of the [Clin Anat. 2007]

Recent Activity

See reviews...

See all...
Let us look up the word "dressing"
Keyword searching

Simplest search to do
1. Type in word(s)
2. Click **GO** or hit **Enter** on keyboard.

Computer searches for character strings (letters, numbers, punctuation) that match what you have entered.
What is dressing?

- **Oxford Reference Library**

  **dressing**
  A Dictionary of Construction, Surveying and Civil Engineering
  Reference type: Subject Reference
  Current Version: 2013
  Subject: Science and technology, Engineering and Technology
  Length: 0 words

  ... Shaping and cutting materials to their finished dimensions....

  **dressing**
  A Dictionary of Dentistry
  Reference type: Subject Reference
  Current Version: 2010
  Subject: Medicine and health, Dentistry
  Length: 50 words

  ... A dressing may contain some form of medication; for example a zinc oxide eugenol dressing....

  **dressing**
  Concise Medical Dictionary (8 ed.)
  Reference type: Subject Reference
  Current Version: 2010
  Subject: Medicine and health
  Length: 23 words

  ... n. material applied to a wound or diseased part of the body, with or without medication....
Homonym troubles

Keyword searches don’t recognize homonyms (one combination of letters that can represent several different meanings).

- **Dressing** retrieves articles on both
  - bandages on wounds AND
  - putting clothing on.

- **Hearing** retrieves articles on both
  - auditory function AND
  - the judicial function of Congress or a committee.

- **Aids** retrieves articles on both
  - Acquired Immunodeficiency Syndrome (AIDS) AND
  - visual aids (posters/graphics) about any disease.
Keyword searches can give bad results because they...

1. Ignore negating expressions (but, except, never…).
2. Treat all words as equally important.
3. Don’t include synonyms and varieties of a search term (infant, infants, infantile, infancy, neonate, newborn, baby…).
4. Ignore ambiguities (right to life, right vs. left).

Examples
Citations by keywords - HIV infection prevention

Results: 1 to 20 of 11226

   [No authors listed]
   AIDS Alert. 2009 Dec;24(12):140-1. No abstract available.
   PMID: 20063477 [PubMed - indexed for MEDLINE]
   Related articles

2. Treatment for hepatitis B.
   Cooke GS, Main J, Thursz MR.
   PMID: 20051467 [PubMed - indexed for MEDLINE]
   Related articles

3. Intimate partner violence.
   [No authors listed]
   HRSA Careaction. 2009 Sep;1-12. No abstract available.
   PMID: 20050220 [PubMed - indexed for MEDLINE]
   Related articles

   [No authors listed]
Ignoring negatives

- Search using “developing countries”.

- Result: Community hospitals--the place of local service provision in a modernising NHS: an integrative thematic literature review.

- The abstract states:
  “We included papers of any study design focusing on hospitals in which care was led principally by general practitioners or nurses. Papers from developing countries were excluded.”

Not what Einstein wanted!
Keyword search results

- Too many to read through
- Lots of false hits
- Results that barely mention your terms
- Headaches and time drains.
When in-depth searching is involved,

simple ≠ best.
What is MeSH?

Medical Subject Headings

- Standardized phrases describing topics specific to the health sciences.
Why use subject headings?

- Humans apply subject headings. In doing so, they
  - Consider negating words like *but, not, except* so your results won’t include citations in which your search terms are specifically excluded.
  
- Weigh the relative importance of the search term to the whole article.
The indexing process

A plea for international understanding.

EINSTEIN A

MeSH Terms:
• Nuclear Energy*

PMID: 1892076 [PubMed - indexed for MEDLINE]
Not all citations in PubMed have MeSH terms

Citations without MeSH terms:

- PMID:21534234[PubMed - as supplied by publisher]
- PMID:21534266[PubMed - in process]
- PMID:14801968[PubMed - OLDMEDLINE]
MEDLINE
(indexed with MeSH)
Evaluating intersectoral collaboration: a model for assessment by service users.

Aharon E, Axelsson SB, Axelsson R.
Nordic School of Public Health, P.O. Box 12133, SE-402 42 Göteborg, Sweden.

Abstract

INTRODUCTION: DELTA was launched as a project in 1997 to improve intersectoral collaboration in the rehabilitation field. In 2005 DELTA was transformed into a local association for financial co-ordination between the institutions involved. Based on a study of the DELTA service users, the purpose of this article is to develop and validate a model that can be used to assess the integration of welfare services from the perspective of the service users.

THEORY: The foundation of integration is a well functioning structure of integration. Without such structural conditions, it is difficult to develop a process of integration that combines the resources and competences of the collaborating organisations to create services advantageous for the service users. In this way, both the structure and the process will contribute to the outcome of integration.

METHOD: The study was carried out as a retrospective cross-sectional survey during two weeks, including all the current service users of DELTA. The questionnaire contained 32 questions, which were derived from the theoretical framework and research on service users, capturing perceptions of integration structure, process and outcome. Ordinal scales and open questions were used for the assessment.

RESULTS: The survey had a response rate of 82% and no serious biases of the results were detected. The study shows that the users of the rehabilitation services perceived the services as well integrated, relevant and adapted to their needs. The assessment model was tested for reliability and validity and a few modifications were suggested. Some key measurement themes were derived from the study.

CONCLUSION: The model developed in this study is an important step towards an assessment of service integration from the perspective of the service users. It needs to be further refined, however, before it can be used in other evaluations of collaboration in the provision of integrated welfare services.

PMCID: 1934037 [PubMed - In process] PMC: PMCID2663704 Free PMC Article
How PubMed’s MeSH database helps

- Enables you to search precisely yet comprehensively on a subject.

- Suggests terms if you’ve typed in a non-MeSH term or mistyped/misspelled a MeSH term.

- Retrieves citations published between 1966 and last week.*

* Citations published before 1966 or in the previous weeks don’t have Medical Subject Headings, so you’ll need to keyword search to retrieve them.
1 meaning: 1 term

- Subject headings represent unique meanings for homonyms.

  - Example: Instead of the multi-meaning keyword *delivery*, you would use:
    - *Drug Delivery Systems* or
    - *Home Childbirth* or
    - *Delivery* of Health Care.
Where can I find MeSH terms?

1. Use the links on them in a relevant result from a keyword search.

2. Look them up in the MeSH database.
What is this article about?

Display Settings: Abstract

A chorus of disapproval.
[No authors listed]

MeSH Terms
- AIDS Vaccines/economics
- Acquired Immunodeficiency Syndrome/drug therapy
- Acquired Immunodeficiency Syndrome/economics*
- Acquired Immunodeficiency Syndrome/epidemiology
- Acquired Immunodeficiency Syndrome/prevention & control*
- Anti-HIV Agents/economics*
- Anti-HIV Agents/supply & distribution
- Anti-HIV Agents/therapeutic use*
- Developing Countries/economics
- Global Health*
- Humans
- United Nations
Change display to MEDLINE
Stealing MeSH

1. Perform a keyword search on your topic.

2. Find a relevant result.

3. Click on a relevant term from the MeSH terms list to search on it.
Conclusions

This scoping review revealed that abstracts are frequently inconsistent with full reports, and efforts are needed to improve the consistency of abstract reporting in the primary biomedical community.
Where is the MeSH database?
Click Add to search builder.
Click Search PubMed.
To search for specific aspect(s) of a topic
Attach subheadings to your MeSH term

HIV Infections
Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, thru AIDS-related complex (ARC), to acquired immunodeficiency syndrome (AIDS).
Year introduced: 1990

PubMed search builder options
Subheadings:

- □ analysis
- □ anatomy and histology
- □ blood
- □ cerebrospinal fluid
- □ chemically induced
- □ classification
- □ complications
- □ congenital
- □ cytology
- □ diagnosis
- □ diet therapy
- □ drug therapy
- □ economics
- □ epidemiology
- □ ethology
- □ etiology
- □ genetics
- □ history
- □ immunology
- □ metabolism
- □ microbiology
- □ mortality
- □ nursing
- □ organization and administration
- □ parasitology
- □ pathology
- □ prevention and control
- □ psychology
- □ radiography
- □ radionuclide imaging
- □ radiotherapy
- □ rehabilitation
- □ statistics and numerical data
- □ surgery
- □ therapy
- □ transmission
- □ ultrasonography
- □ urine
- □ veterinary

For term definitions, click Subheadings.
More on subheadings

"HIV Infections/prevention and control"[Mesh]

HIV infections / Prevention & control

vs

HIV infections .................................................................
.................................................. tuberculosis prevention and control.................................................................

HIV Infections AND Prevention and control
Male circumcision for HIV prevention in sub-Saharan Africa: who, what and when?

White RG, Glynn JR, Orroth KK, Freeman EE, Bakker R, Weiss HA, Kumaranayake L, Habbema JD, RJ.

London School of Hygiene and Tropical Medicine, London, UK. richard.white@lshtm.ac.uk

MeSH Terms

- Circumcision, Male/economics
- Circumcision, Male/utilization*
- Developing Countries*
- HIV Infections/economics
- HIV Infections/prevention & control*
- HIV-
- Health Care Costs
"HIV Infections" [Mesh]

Includes

"HIV Infections" [Mesh]
"HIV Infections/prevention & control"[Mesh]
"HIV Infections/any subheading listed"[Mesh]
"HIV Infections" [Major]
"HIV Infections/prevention & control"[Major]
"HIV Infections/any subheading listed"[Major]
1. In the **MeSH database** type in your term. **Search.**

2. Click on the *most appropriate* MeSH term.

3. Click the “**Restrict to MeSH Major Topic**” checkbox.

---

**HIV Infections**

Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, thru AIDS-related complex acquired immunodeficiency syndrome (AIDS).

Year introduced: 1980

PubMed search builder options

- Subheadings:
  - analysis
  - diet therapy
  - drug therapy
  - **economics**
  - epidemiology
  - organization and administration
  - parasitology
  - pathology
  - physiology
  - physiopathology
  - prevention and control
  - ultrasonography
  - urine
  - veterinary
  - virology

- **Restrict to MeSH Major Topic**
The importance of assessing out-of-pocket payments when the financing of antiretroviral therapy is transitioned to domestic funding: findings from Vietnam.

Johns B¹, Chau LB², Hanh KH³, Huong NT³, Do HM², Duong AT¹, Nguyen LH⁴.

Author information

Abstract

OBJECTIVE: To assess out-of-pocket payments and catastrophic health expenditures among antiretroviral therapy payment scenarios when the primary as representative of 87% of ART patients are treated with antiretroviral drugs. Other health expenditures were 5 ($7-$22) were directly for HIV-related health services. If patients had to pay 20% of costs to 8% (95% CI: 5.5-10.0%), and if payment rate among all patients was 24% (95% CI: 21.1-27.4).

CONCLUSIONS: Health and catastrophic expenditures were substantially lower than in previous studies, although different methods may explain some of the discrepancy. The 20% copayments required by social health insurance would present a financial burden to an additional 0.6% to 5.1% of ART patients. Ensuring access to health insurance for all ART patients will prevent an even higher level of financial hardship.

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To EXPlode or not to EXPlode?

- **Exploding** means searching for both a term and all the more specific terms under it in the MeSH tree of terms.

- PubMed automatically explodes MeSH terms.

- To unexplode, that is search only for the general topic, click the box immediately beneath Major MeSH.
MeSH:NoExp versus MeSH

Results: 1 to 20 of 3555

1. Treatment Supplements Improve ART success in Africa.
   [No authors listed]
   PMID: 25151573 [PubMed - indexed for MEDLINE]
   Related citations

2. HIV-associated renal and genitourinary comorbidities in Africa.
   Kalyesubula R, Wearn N, Semitale FC, Bowa K.
   PMID: 25179632 [PubMed - indexed for MEDLINE]
   Related citations

   PMID: 25179637 [PubMed - indexed for MEDLINE]
   Related citations

4. [Psychosocial aspects on the treatment of HIV-infection].

Results: 1 to 20 of 23089

1. Viral load monitoring and antiretroviral treatment outcomes in a pediatric HIV cohort in Ghana.
   Kukoyi O, Renner L, Powell J, Barry O, Prin M, Kusah J, Cong X, Pantasil E.
   PMID: 26934361 [PubMed - indexed for MEDLINE]
   Related citations

   Dako-Gyeke P, Dormoo B, Ayisi Addo S, Atuahene M, Addo NA, Yawson AE.
   PMID: 26735240 [PubMed - indexed for MEDLINE]
   Related citations

   PMID: 26517683 [PubMed - indexed for MEDLINE]
   Related citations

4. HIV knowledge, stigma, and illness beliefs among pediatric caregivers in Ghana who have not disclosed their child's HIV status.
   Pantasil E, Renner L, Antwi S, Damme J, Enimil A, Ofoto-Atta A, Alhassan A, Ofoto IP, Cong X, Kyrkak...
Obtain MeSH terms using MeSH database

HIV Infections
Includes the spectrum of human immunodeficiency virus infections that range from asymptomatic seropositivity, thru AIDS-related complex (ARC), to acquired immunodeficiency syndrome (AIDS).
Year introduced: 1990

Pubmed search builder options
Subheadings:
- analysis
- anatomy and histology
- blood
- cerebrospinal fluid
- chemically induced
- classification
- complications
- congenital
- cytology
- diagnosis
- diet therapy
- drug therapy
- economics
- embryology
- enzymology
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- history
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- metabolism
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- nursing
- organization and administration
- parasitology
- pathology
- physiology
- physiopathology
- prevention and control
- psychology
- radiography
- radionuclide imaging
- radiotherapy
- rehabilitation
- statistics and numerical data
- surgery
- therapy
- transmission
- ultrasonography
- urine
- veterinary
- virology

Do not include MeSH terms found below this term in the MeSH hierarchy.
Articles that address the issues of prevention of AIDS in low-income countries?

**Concept 1**
Use OR to combine alternative terms and synonyms.

AIDS

**Concept 2**
Use OR to combine alternative terms and synonyms.

Low Income Countries

AND
AND

“HIV Infections” [Mesh] AND “Developing Countries” [Mesh]

AND = Finds results that contain both keywords.
MeSH / Subheadings

"HIV Infections" [Mesh]

Includes

"HIV Infections" [Mesh]

"HIV Infections/prevention & control"[Mesh]

"HIV Infections/any subheading listed"[Mesh]

"HIV Infections" [Major]

"HIV Infections/prevention & control"[Major]

"HIV Infections/any subheading listed"[Major]
OR

"Developing Countries" [Mesh]  "Low income countries" [TIAB]

OR = Finds results that contain either keyword.
Problems finding a MeSH term?
Use the [TI] and [SB] tags to find MeSH terms
Identifying the concepts in MeSH terms
Coupling MeSH to create a concept

“World Health Organization” [Mesh]

“Global Health” [Mesh]

“Internationality/legislation and jurisprudence” [Mesh]

Public Health/legislation and jurisprudence” [Mesh]

“Infection Control/legislation and jurisprudence” [Mesh]
Concept 1 AND concept 2 = new single concept

“Global Health” [Mesh]
OR
"World Health Organization" [Mesh]

"Infection Control/
legislation and jurisprudence" [Mesh]
OR
"Internationality/
legislation and jurisprudence" [Mesh]
OR
"Public Health/
legislation and jurisprudence"

“Global Health” + "Infection Control"/lj ≈ International Health Regulations
Incorrect syntax – AND vs and
Nesting using (….)

Parentheses can keep words/MeSH terms together to express one concept:

\[
\left( (A \text{ OR } B) \text{ AND } (C \text{ OR } D \text{ OR } E) \right)
\]

\[
\left( \left( \text{“Global Health" [Mesh]} \text{ OR } \text{“World Health Organization" [Mesh]} \right) \text{ AND } \left( \text{“Infection Control/legislation and jurisprudence" [Mesh]} \text{ OR } \text{“Internationality/legislation and jurisprudence" [Mesh]} \text{ OR } \text{“Public Health/legislation and jurisprudence" [Mesh]} \right) \right)
\]
Behind the scenes at PubMed
("Int Health"[Journal] OR ("international"[All Fields] AND "health"[All Fields]) OR "international health"[All Fields]) AND ("legislation and jurisprudence"[Subheading] OR ("legislation"[All Fields] AND "jurisprudence"[All Fields]) OR "legislation and jurisprudence"[All Fields] OR "regulations"[All Fields] OR "social control, formal"[MeSH Terms] OR ("social"[All Fields] AND "control"[All Fields] AND "formal"[All Fields]) OR "formal social control"[All Fields])
No mention of International Health Regulations OR IHR in the PubMed Record
International Health Regulations

The World Health Organization (WHO) has the main responsibility for controlling the international spread of disease. The first edition of the International Health Regulations (IHR) was published in 1969, superseding the International Sanitary Regulations that were adopted by the fourth World Health Assembly in 1951. In 2005 the second edition of the IHR was published, which entered into force 2 years later. It included a number of innovations and unlike the 1969 edition its scope was not limited to specific diseases. Article 2 of the IHR (2005) states:

"The purpose and scope of these Regulations are to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."

There is a balance to be struck between the control of international spread of disease and the avoidance of flying insects, such as mosquitoes, from entering the aircraft. In-service testing is yet to be undertaken but in the laboratory its effectiveness has been demonstrated.

Article 25 — Ships and aircraft in transit refers to the right of an aircraft to take on supplies at an airport, without having any health measures applied to it or the travellers on board. This is not the usual situation of an aircraft landing at an airport, since normally travellers embark or disembark, but it does occur in a percentage of flights.

Article 27 — Affected conveyances concerns the action to be taken, i.e. disinfection, decontamination, disinsection or de-ratting, in the event that an aircraft is believed to be ’affected’, i.e. presents a public health risk, perhaps because of an infectious passenger. Such action is the responsibility of the ’competent authority’ normally the national public health authority or local representative. The aircraft operator will comply with any request from the competent authority, but because of the potential for disruption of air operations, such actions should be jointly considered in advance of their implementation so as to ensure efficient application and to minimise delay and/or

Received 22 February 2010; accepted 23 February 2010
Single MeSH = single concept

"Maternal Mortality" [Mesh]
MeSH 1 AND MeSH 2 = new single concept

("Pregnant Women"[Mesh] + "Mortality"[Mesh]) ≈ "Maternal Mortality"
Why keywords are still important
Not all citations in PubMed have MeSH terms

The following will citations do not have MeSH terms

- PMID:21534266[PubMed - in process]
- PMID:21534234[PubMed - as supplied by publisher]
- PMID:14801968[PubMed - OLDMEDLINE]
Is the Indexer perfect? Not always.

<table>
<thead>
<tr>
<th>MeSH Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>MeSH Terms</td>
</tr>
<tr>
<td>Animal Diseases/epidemiology*</td>
</tr>
<tr>
<td>Animals</td>
</tr>
<tr>
<td>Animals, Domestic</td>
</tr>
<tr>
<td>Animals, Wild</td>
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<tr>
<td>Cattle</td>
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<tr>
<td>Disease Outbreaks/veterinary*</td>
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<tr>
<td>Great Britain/epidemiology</td>
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<tr>
<td>Poisoning/epidemiology</td>
</tr>
<tr>
<td>Poisoning/veterinary*</td>
</tr>
<tr>
<td>Sentinel Surveillance/veterinary*</td>
</tr>
<tr>
<td>Species Specificity</td>
</tr>
</tbody>
</table>

**Lead poisoning** in cattle associated with car batteries and sump oil.

[No authors listed]


PMID: 21961156 [PubMed - indexed for MEDLINE]

Related citations
Use search details

Search details will give you an overview of how PubMed has Meshed your terms and which fields have been searched.
Check search details

Quoted phrase not found:

"HIV Infections[MeSH]"

"hiv infect**[tw]"

"human immun**"

"acquired immun**"
Is “aids”[ALL Fields] retrieving too many irrelevant citations?

Query Translation:

"HIV Infections"[Mesh] OR "HIV infection*"[All Fields] OR Acquired[All Fields] OR ("acquired immunodeficiency syndrome"[MeSH Terms] OR ("acquired"[All Fields] AND "immunodeficiency"[All Fields] AND "syndrome"[All Fields]) OR "acquired immunodeficiency syndrome"[All Fields] OR "aids"[All Fields])
Articles addressing AIDS prevention in developing countries

Concept 1

Use OR to combine alternative terms and synonyms

“HIV infections”[Mesh]

OR

HIV infection*[TW]

OR

AIDS[TI]

AND

Concept 2

Use OR to combine alternative terms and synonyms

“Developing countries”[Mesh]

OR

“Africa”[Mesh]

OR

“low income countries”[All Fields] OR “low income country” [All Fields]
Which WHO staff person is the specialist on lead poisoning?

**TEMPOWSKI, Ms Joanna Helena**
Scientist
HQ/EPE Evidence and Policy on Emerging EH Issues (HQ/HSE/PHE/EPE)

- tempowskij@who.int
- 13571/11238
- 13571 (GPN number)
- +41795989752 (Mobile number)
- L223

**GARCIA MORENO ESTEVA, Doctor Claudia M.**
Lead Specialist
HQ/GRR - Gndr, Reproductive Rights, Sexual Hlth and Adolescense [HQ/FWC/RHR/REN/GRR]

- garciamorenoc@who.int
- 14353/13349
- 14353 (GPN number)
- +41795090650 (Mobile number)
- X119
Using phrases - lead poisoning


However

Structured inspection of medications carried and stored by emergency medical services agencies identifies practices that may lead to medication errors.

Related citations
Using **tags** or **Advanced Search**

## Search Field Descriptions and Tags

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
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<tr>
<td>Affiliation [AD]</td>
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<td>Location ID [LID]</td>
<td></td>
</tr>
<tr>
<td>MeSH Date [MHDA]</td>
<td></td>
</tr>
<tr>
<td>MeSH Major Topic [MAJR]</td>
<td></td>
</tr>
<tr>
<td>MeSH Subheadings [SH]</td>
<td></td>
</tr>
<tr>
<td>MeSH Terms [MH]</td>
<td></td>
</tr>
<tr>
<td>MeSH Unique ID [JID]</td>
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</tr>
<tr>
<td>Other Term [OT]</td>
<td></td>
</tr>
<tr>
<td>Owner</td>
<td></td>
</tr>
<tr>
<td>Pagination [PG]</td>
<td></td>
</tr>
<tr>
<td>Personal Name as Subject [PS]</td>
<td></td>
</tr>
<tr>
<td>Pharmacological Action MeSH Terms [PA]</td>
<td></td>
</tr>
<tr>
<td>Place of Publication [PL]</td>
<td></td>
</tr>
<tr>
<td>PMCID &amp; MID</td>
<td></td>
</tr>
<tr>
<td>Publication Date [DP]</td>
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<tr>
<td>Publication Type [PT]</td>
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<td>Secondary Source ID [SI]</td>
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<tr>
<td>Subset [SB]</td>
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<tr>
<td>Substance Name [NM]</td>
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</tr>
<tr>
<td>Text Words [TW]</td>
<td></td>
</tr>
<tr>
<td>Title [TI]</td>
<td></td>
</tr>
<tr>
<td>Title/Abstract [TIAB]</td>
<td></td>
</tr>
<tr>
<td>Transliterated Title [TT]</td>
<td></td>
</tr>
<tr>
<td>UID [PMID]</td>
<td></td>
</tr>
<tr>
<td>Volume [VI]</td>
<td></td>
</tr>
</tbody>
</table>
Use of tags

- "world health" [TIAB] [Title & Abstract]
- "world health" [AD] [Address of the Authors]
- "world health" [TA] [Title Abbreviated of the Journal i.e. Bull World Health]
- "world health" [ALL] [All Bibliographic Fields]
- “world health” [MH] "Global Health" [MeSH]
- “world health” [MAJR] "Global Health" [MAJR]
Use tags appropriately

- Tags such as [AU] = author or [TI] = title can be ANY terms.

- However some tags are specific
  - [Mesh]
  - [Major]
  - [SH] = subheading
  - [PS]
  - [PA]

- These tags need to be looked up as they are standardised. [Mesh] tags must be in the database.
Using * for truncation

- Replaces any letters in a word
  - HIV Infection*
  - "HIV Infection" or "HIV Infections"
  - "HIV Infections" [Mesh] OR HIV infection*
  - "HIV Infections"[Mesh] OR "HIV infection"[All Fields] OR "HIV infections"[All Fields] OR "HIV infected"[All Fields]

- Use carefully and always test your results.

- Turns off the ability of PubMed to find the correct MeSH term.
Quantity vs precision
#1 yields fewer results than #5

1. "HIV Infections/prevention and control" [Major]
2. "HIV infections/prevention and control" [Mesh]
4. (HIV infection* OR HIV infections [Mesh] ) AND (prevention OR control OR "prevention and control "[Subheading])
5. (AIDS OR HIV OR HIV infections [Mesh] ) AND ((Prevent* AND control*) or ("prevention and control "[Subheading]))
Precision vs quantity

#1 yields more relevant results than #5

1. "HIV Infections/prevention and control" [Major]
2. "HIV infections/prevention and control" [Mesh]
3. HIV infections [Mesh] AND "prevention and control" [Subheading]
4. (HIV infection* OR HIV infections [Mesh] ) AND (prevention OR control OR "prevention and control" [Subheading])
5. (AIDS OR HIV OR HIV infections [Mesh] ) AND ((Prevent* AND control*) or ("prevention and control" [Subheading]))

Relevance to the question
Test your search strategy

- Check your search strategy for spelling mistakes, truncation problems.
- Adapt your strategy for each database.
- Have someone go over the strategy.
How to test your strategy

---

Vision Test

Normal Vision People will see Albert Einstein in the Picture

Near-Sighted People will see Marilyn Monroe

NOTE* If you see Einstein then step back a ways to see Marilyn Appear

Test Created by Dr. Aude Oliva, MIT in 2007
Use Word and PubMed’s Search History

Developing countries
"Developing Countries" [Mesh] OR "Africa" [Mesh] OR "low income countries"
OR "low income country” OR low resource setting* OR “LMIC”

HIV concept 1
(AIDS OR HIV OR HIV infections [Mesh]) AND ((Prevent* AND control*) or
("prevention and control" [Subheading]))

HIV concept 2
"HIV Infections/prevention and control" [Major]
Advantages of Word/Search History combo

- Easy to add and remove search terms or otherwise adjust search strings.
- Allows us to reuse search strings and strategies
- Makes it simple to add new search concepts to existing strategies.
- Easy to correct mistakes.
- Saves our strategies beyond eight hours.
Use Search History to check terms
Use Word to build strategy

Type in the keywords you would like to include, put phrases in quotation marks and truncate where appropriate.

Template or model format

\[
\left( \text{"HIV Infections"[Mesh]} \text{ OR } \text{HIV infection*} \text{ OR } \text{"Acquired immunodeficiency"} \text{ OR } \text{AIDS} \right) \text{ AND } \left( \text{"Developing Countries"[Mesh]} \text{ OR } \text{"Africa"[Mesh]} \text{ OR } \text{"low income countries"} \text{ OR } \text{"low income country"} \text{ OR } \text{low resource setting*} \text{ OR } \text{"LMIC"} \right) \text{ AND } \left( \text{Other concept [MH]} \text{ OR } \text{other concept [ALL]} \text{ OR } \text{other concept [TIAB]} \right)
\]
First one to discover $E=MC^2$?
Don't re-invent Einstein's Theory of Relativity

- Try to find other searcher's strategies they have used.
- The Cochrane Library's systematic reviews will usually list at least the key search terms, if not the entire search strategy.
- Other systematic or literature reviews, guidelines etc will document the search strategy.
Database of search concept strings
## Bibliographic Fields:

<table>
<thead>
<tr>
<th>Reference Type</th>
<th>Online Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author</td>
<td>PubMed</td>
</tr>
<tr>
<td>Title</td>
<td>Child - up to age 18</td>
</tr>
</tbody>
</table>

## Optional Fields:

<table>
<thead>
<tr>
<th>Abstract:</th>
</tr>
</thead>
</table>

| Name of Database:          | Medline         |
| Database Provider:        | PubMed          |
| Added to Library:         | 30 May 2012     |
| Last Updated:             | 30 May 2012     |

**Groups:** [Unfiled]
To access search concepts

- You need to create an EndNote WEB BASED account by visiting http://www.myendnoteweb.com.
- Anyone can create an account with any email. Currently a free option.
- Send email to allent@who.int and indicate the email you used to create the EndNote BASIC account.
- I will then share with you database.
- Note: All filters are as-is. No guarantees.
Plot your search strategy

Search Planning Form

Use this form to identify/clarify the key concepts and the scope of your research topic. For each section, refer to the guidance notes on the following page for further explanation.

Name: ..........................................................

Date search started: _______________ Date search completed: _______________

1. Your Research Topic

2. Consider how the following four categories apply to your research topic

<table>
<thead>
<tr>
<th>Patient/Population and/or Problem</th>
<th>Intervention</th>
<th>Comparison/Control (if applicable)</th>
<th>Outcomes (or Effects)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Alternative Words
Keep track of where you have searched

### Guidance notes

The resource checklist is divided into 3 levels: core, recommended and additional. Alongside each resource, tick the appropriate column: searched, not applicable (N/A) or unavailable.

**Level 1 – core resources**

Effective searches across these sources will help ensure that your literature search covers a significant proportion of published research.

Consider how retrospective the search needs to be, e.g. from the time when a drug was introduced; also consider whether the coverage of your source is sufficiently retrospective and/or up-to-date.

These resources should be searched as a minimum requirement unless they are not appropriate to your research topic. If there are time constraints, section 1) minimum core resources should be given priority.

How far you proceed beyond Level 1 will depend on:

- The subject of your research
- The type of studies you need to locate (e.g. RCTs)
- The time available
- Availability of sources
- How essential it is to ensure your research is not duplicating research elsewhere

*Resources marked with a * are not available through the NHS core content collection or freely available on the Internet but may be accessible through a University Library or by payment of a fee.

See next page for continued guidance notes.

### LEVEL 1: CORE RESOURCES

**a) Minimum core resources:**

- Cochrane Library
- Centre for Reviews and Dissemination (CRD) website for latest updates to CRD databases
- MEDLINE & PREMEDLINE OR PubMed
- EMBASE
- Subject specialist databases appropriate to research topic, (contact your librarian with advice on identifying others) e.g. a) Allied & Complementary Medicine (AMED)
  b) Applied Social Sciences Index & Abstracts (ASSIA)*
  c) British Nursing Index (BNI)
  d) CareData
  e) Cumulative Index to Nursing & Allied Health Literature (CINAHL)
  f) DH-DATA
  g) King’s Fund
  h) PsycINFO
  i) BIOSIS
  j) Campbell Collaboration’s Social, Psychological, Educational & Criminological Trials Register (C2-SPECTR)
  k) ChildData *
  l) Education Resources Information Center (ERIC)
- National Research Register & Research Findings electronic Register (ReFeRi)
- metaRegister of Controlled Trials (mRCT)
- National Library of Medicine ClinicalTrials.gov
- Guidelines sites e.g. National Institute for Health and Clinical Excellence (NICE)
- Websites of relevant associations, societies, centres of excellence, royal colleges & government bodies

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Keeping track of identified studies

- You may find several reports of the same study.

- You may find the same report of a study in several databases.
Reporting your search

- Qualifications of searchers
- Search strategy
- Effort to include all available studies
- Search software
- Use of hand searching
- List of citations found
- Method of addressing non-English studies
- Handling of unpublished literature
- Description of any contact with authors.

Source: Donna F. Stroup, PhD, MSc; Jesse A. Berlin, ScD; Sally C. Morton, PhD; Ingram Olkin, PhD; G. David Williamson, PhD; Drummond Rennie, MD; et al. Meta-analysis of observational studies in epidemiology: a proposal for reporting. *JAMA*. 2000;283(15):2008-2012. doi:10.1001/jama.283.15.2008. 
MeSH - Einstein's tool for catching the best results

Relevant and comprehensive citations from PubMed

1: Policy drives harm reduction for drug abuse and HIV/AIDS prevention in some developing countries.

2: Psychosocial support for HIV-infected populations in developing countries: a key yet understudied component of positive prevention.

3: The effectiveness of community interventions targeting HIV and AIDS prevention at young people in developing countries.

4: Rates, barriers and outcomes of HIV serostatus disclosure among women in developing countries: implications for prevention of mother-to-child transmission programmes.

5: Opportunities and pitfalls in integration of family planning and HIV prevention efforts in developing countries.
Photo credits
(in order of appearance)


2. Searching made simple but still smart. Source: Public domain/unknown.


5. When in-depth searching. Source: Public domain/Ferdinand Schmutzer.

7. The indexing process. **Photo source:** Public domain/US government. **Cartoon source:** Public domain/dgrauman.

8. Where can I find MeSH terms? **Source:** Public domain/Benjamin Couprie.

9. What is this article about? **Source:** CC-BY-SA-2.0/John Mick.

10. To explode or not to explode? **Source:** CC BY-SA 2.5/Greg Williams, cropped.

11. Is Ms. Indexer perfect? **Source:** CC BY-SA 2.0 FR/Rama.

12. Test your search strategy. **Source:** Public domain/Los Angeles Times photoarchives.
Photo credits
(in order of appearance)


14. First one to discover. Source: Public domain/Stannered, and Office.com clipart.

15. Reporting your search. Source: Public domain/Harris & Ewing.


PubMed – the Einstein method

Email: LNK@who.int

October 8, 2018