How to Find PubMed Specific Quotes for Family Medicine and Primary Health Care

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Abstract

With 27 million citations and more than 26,000 descriptors, PubMed published by the National Library of Medicine (NLM) is not always easy to consult for Family Medicine and Primary Health Care which are not easy to identify in the MeSH database. We first propose to split these two concepts, to identify in the Medical Subject heading (MeSH) thesaurus the entries that correspond to them and to use the MyNCBI service, made available by the NLM, to prepare two tailored document filters.

Résumé

Avec 27 millions de citations et plus de 26.000 descripteurs, PubMed édité par la National Library of Medicine (NLM) ne se laisse pas toujours aisément consulter. La médecine de famille (MF) et les Soins de Santé Primaires (SSP) n’y sont pas aînés à cerner. Nous proposons d’abord de scinder ces deux concepts, d’identifier dans le thésaurus Medical Subject heading (MeSH) les entrées qui leur correspondent et d’utiliser le service MyNCBI, mis à disposition par la NLM pour préparer deux filtres documentaires sur mesure.

Key words: family medicine; primary health care; bibliography; PubMed; LiSSa

An online interface dedicated to family medicine and primary care

There are many filters applicable to PubMed for general practice/family medicine (GP/FM) and primary health care (PHC) but they do not seem to distinguish between the two concepts\textsuperscript{1,2,3}. The origin and representation of 187 contextual concepts of family medicine were the subject of a detailed study described elsewhere\textsuperscript{4,5}. Each item is available online at www.hetop.eu/Q, where they are defined in detail, and allows an automatic query of the PubMed bibliographic database. The search strategy generated on PubMed uses the MeSH described in the Tableau 1, as well as the MeSH “Entry Term” for each concept\textsuperscript{6}. This strategy provides extensive results that can be reused to refine research on other concepts of the HeTOP/Q base. They will also serve as additional specific filters.

The Family Physician and Primary Care concepts form two of these 187 concepts and have also an online description (see Tableau 2) on www.hetop.eu/Q as well as automated access to PubMed. PubMed is a complex documentary system marked by its historicity and in which the GP/FM and PHC descriptors were built in a disordered way. The two sets of MeSH representative of the two concepts, studied in detail with their dates of apparition, are listed in Tableau 1.

From this distribution, two separate search strategies are prepared, using respectively a set of 7 and 8 descriptors. The reader will learn here how to use these descriptors as a filter for future research that focuses either on General Practice/Family Medicine (GP/FM) or Primary Health Care (PHC).
How does the bibliographic search on www.hetop.eu/Q?

In the online edition of the 187 contextual concepts of family medicine and primary care on www.hetop.eu/Q, these two systems are described respectively under the codes QS1 Primary Care and QS41 Family Physician. These two codes have each a freely accessible immutable Internet address called URI (Uniform Resource Identifier).

Tableau 2 URI for two concepts. To change the language just change the acronym: la = en. Are available = fr = nl = ua = ko = ka = vi = tr

QS1 Primary Care http://www.hetop.eu/hetop/Q?la=en&rr=CGP_QC_QS1

QS41 Family Physician http://www.hetop.eu/hetop/Q?la=en&rr=CGP_QC_QS41

Each concept gives access to a card containing its position in the hierarchy, a description, relations with other terminologies and to an automated consultation of bibliographic bases LiSSa (French) and PubMed. An automatic equation is generated for each code (see Tableau 3 and Tableau 4) and the result displayed in the PubMed interface (Figure 1)

Tableau 3 PubMed’s HeTOP search strategy from Q-Code QS1 Primary Health Care (147,732 citations as of 25/03/2018)

Additional document for the workshop : A KNOWLEDGE MANAGEMENT SYSTEM FOR GENERAL PRACTICE / FAMILY MEDICINE, HOW DOES IT WORK PRACTICALLY?
April 7, 2018, 11h00 - 12h30.  Room 243.  GMGF 2018, Paris

Tableau 4 HeTOP search strategy on PubMed from Q-Code QS41 Family Physician (141,719 citations as of 25/03/2018)

MyNCBI is a facility made available to each PubMed user by the National Library of Medicine (NLM). By introducing the search strategies proposed in the filter of MyNCB we obtain two specific filters, PHC and GP/FM, which can be applied to all searches performed on the PubMed interface.

Example of a bibliographic search strategy on www.hetop.eu/Q

An example of use in a preparatory bibliography for an end-of-study work on homelessness using the HeTOP system is shown here. The search strategy automatically generated by the HeTOP engine on PubMed is shown in Tableau 5. As of 25/03/2018 this strategy brings back 11,492 quotes.

Tableau 5 HeTOP search strategy on PubMed from Q-Code QC33 homeless

By crossing the result of QC33 homeless (Table 5) with the AND connector to the search strategy resulting from the concept QS1 Primary care reproduced in Tableau 3, the choice is reduced to 1482 quotes as shown in Figure 1 under 8 full PHC. By crossing with the research strategy results of QS41 Family Physician, reproduced in Tableau 4, the choice is reduced to 284 references as shown on the screenshot under 7 full GM/FM (Figure 1).

Figure 1 PubMed interface obtained for QS33 Homeless on HeTOP. We see the beginning of the automatic search strategy. On the right, in the specific field of MyNCBI (personal to each user) the last two entries 8 full PHC and 7 full GP/FM gives the number of quotations obtained by applying these filters

These 284 references therefore offer a “family doctor” view of the phenomenon studied, here the Homeless. By activating the PubMed “review” and / or “open access” filters, the choice of references is further reduced.

Research from HeTOP also can continue on the French-language bibliographic database LiSSa, which indexes more than one million articles in French.
A fairly new way of querying the PubMed and LiSSa databases has been described. It should be noted that the usual introduction of "Homeless Persons" [Mesh] in PubMed gives 7,729 citations including 196 by activating the QS41 Family Medicine filter. This means that our approach recovers about 30% more quotes. The technique applied on HeTOP makes it possible to increase the number of quotations and to increase the difference of use of the concept according to the angles PHC or GP/FM. It also allows the user to become familiar with the MesH and its mysteries. This technique has not yet been the subject of a validation study but is already being used successfully by many students.

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