

# Indexing Journal Articles in the Medical Library

by  
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*Ringkasan: Majalah-majalah perubatan adalah sangat mustahak untuk kegunaan penyelidik-penyelidik. Sistem mengindek artikel-artikel majalah wujud oleh kerana timbulnya keperluan untuk memberi panduan kepada pengguna-pengguna supaya mereka boleh merujuk kepada dokumen-dokumen asal dalam masa yang singkat dan cepat. Mengindek secara "in-depth" memerlukan banyak masa dan penelitian. Tetapi, apabila sistem berindek ini disempurnakan, tugas seorang Pustakawan Referensi Perubatan menjaai lebih senang. Dalam sistem mengindek ini, seorang pengindek dikehendaki menterjemah ataupun menjadikan artikel-artikel yang ditulis oleh pengarang-pengarang kepada sesuatu istilah indek perubatan dengan menggunakan daftar wibawa perkara iaitu MESH (Medical subject Heading). Dengan ini, suatu sistem indek yang selaras dapat dijamin.*

## Introduction:

The Medical Library, University of Malaya subscribes to 1,500 journal titles on medicine and related subjects. The collection includes all medical periodicals published in Malaysia and Singapore. Articles by Malaysians and Singaporeans appear in the local journals as well as in the international journals. Medical researchers (including post graduate students) usually base their research on local cases which normally first appear as journal articles. Medical journals, as a source of original research, are of vital importance to the research worker for they provide up-to-date information that may take years to appear in books.

Most of the research information required by medical researchers from the library are not readily accessible through the published catalogues and indexes. Only a few Malaysian and Singapore journals are included in Index Medicus. The first Medical Librarian, Mr. George C.H. Ee, began indexing all journal articles published in Malaysian and Singapore journals as well as journal articles by Malaysians and Singaporeans published in foreign journals in 1970. Since then, the Medical Library staff have been carrying on with indexing of Malaysian and Singapore journals as an on-going project. In 1976, SEAMIC (Southeast Asian Medical Information Center) published the index entries done by Mr. Ee in two volumes (Vol.1 – Author Index, and Vol.2 – Subject Index) under the title "Bibliomed SM; a comprehen-

sive bibliography of medicine and related sciences in Singapore and Malaysia". In 1982, SEAMIC further published "Bibliomed – SM, Supplement". This covered the years 1974 – 1979. This time, the compilation of the index was a cooperative effort of the Medical Librarian, University of Malaya and the Medical Librarian, National University of Singapore.

The needs of users vary widely. The clinician needs information for patient care and thus will want a few recent articles as quickly as possible. Whereas the medical researcher who is preparing a paper or writing a book will need more comprehensive and specialised materials. In order to meet the inquirer's specific needs, the Medical Librarian has to spend hours tracing scattered information in the library. The aim of indexing journal articles is to guide users to materials contained in journals as quickly as possible. It also increases the users ability to work independently in the library.

## Practice:

The journals indexed may be roughly grouped as follows:

1. News bulletin of medical and health professional associations.
2. Journals of medical academic societies.
3. Journals on general science and medicine.

Each journal article indexed includes the author/ authors, title, journal title, volume and number of the issue, pagination and year of publication, e.g.

Ton, S.H. & Lopez, C.G.

Markers of hepatitis B infection in the Malaysian population.

(J Perubatan UKM 3, no.1, 13 – 17, 1981).

The number of subject entries per document varies from document to document depending on the importance of the subject field. The minimum entry is one subject heading per document. In the Medical Library, we assign a maximum of 3 subject headings per article. Sometimes the 3 subject headings provided may not be sufficient. Many articles will contain, in addition to its general subject, valuable information on other topics that may be subsequently sought for and which deserve their own headings. Under such circumstances, 4 or 5 subject headings may be assigned to that article. The articles to be indexed is typed on 4 copies (1 original + 3 carbon copies) of 5" x 3" cataloguing slips.

The original copy is filed alphabetically under the first named author in the author sequence. Since there is only one author entry, it will be impossible to locate any article under the second, third or subsequent authors.

The various subject headings assigned to the article are typed as headings to the carbon copies. The subject headings are filed alphabetically by subject. The most serious drawback of the alphabetical subject index is that it tends to disperse related information. This is because the arrangement of the index heading is by order of the letters of the alphabet rather than by subject. The subject index catalogue is more useful and for obvious reason it is more frequently used.

The current index to journal articles in the Medical Library is divided into two: the alphabetical author index and the alphabetical subject index. This is a five year cumulative index because at the end of the fifth year, SEAMIC undertakes to publish it as a supplement to Bibliomed – SM.

### Problems:

Manual indexing of journal articles requires "in-depth indexing" i.e. the whole article and not just the title is indexed. Catchword title indexing, "Key-word in context" indexing (KWIC) and "Key-word out of context" indexing (KWOC) is unsatisfactory. Very often, the titles do not reflect the content of the articles and entries under keywords will afford no clue to the real subject matter, e.g.:

Haq, Syed M.

On the horizon, where to next.

(J Perubatan UKM 7, no.1, 70 – 71, 1979).

This article traces the development of psychiatry in Peninsular Malaysia with references to under-

graduate and postgraduate programmes. But the title and keywords leave us in the dark concerning the subject matter of the article.

Indexing of items is also complicated by the intricacies of the terminology. The English language is rich in synonyms and near-synonyms. There will be two or more words or phrases that have the same meaning. There will also arise many situations where a subject has both a popular or common name and a medical or technical name. For example, a medical article will use a medical term e.g. Hypertension, whereas a popular article on the same subject will use a popular terminology e.g. high blood pressure. By retaining both, the indexer will in effect be keeping these papers on the same subject apart. A search based on the medical term will retrieve technical papers written for doctors while one based on popular terms will retrieve only papers written for the laymen.

There are also words with more than one meaning known as homonyms. In writing or conversation, the meaning is supplied by the context. These homonyms has to be clarified in indexing to avoid ambiguity.

In subject analysis, many concepts cannot be expressed in one word. New subjects often grow out of old ones and can only be described by a phrase. These present the indexer with a further set of problems, since he/she will now have to decide not only on the form of the individual elements in a subject but also the order in which to put them.

If the indexer uses terms as they appear in documents without modification, he/she is using natural language. However as has been stated earlier, this can lead to many problems such as those arising from the use of different terminology to denote the same idea. For these reasons, the use of a controlled vocabulary of terms by the indexer ensures consistency and reduces vocabulary problems.

In the field of medicine, the controlled vocabulary of terms used is the National Library of Medicine's noted MeSH (Medical Subject Headings). In MeSH, the "see" reference links synonyms and the cross-reference network of related headings ensures related headings are not inadvertently missed. The related terms are linked by means of two kinds of see also references; "see related (xr)" and "see under (xu)." The "see related (xr)" cross-references are used to link related major descriptors (subjects) not occurring in the same sub-category.

e.g.: **Motor Skills**

xr Child development.

The "see under (xu)" cross-reference serves to link a heading to a single major descriptor in another category.

e.g.: **Morpholines**  
xu Dimorpholamine.  
xu Forminoben.  
xu Phendimetrazine.  
xu Viloxazine.

MeSH headings are revised annually. The new headings which have been added during the previous year are listed together with the headings they replace or expand in a separate listing at the beginning of each annual MeSH annotated list. The indexer is thus alerted to the changes.

Another important aspect of indexing is the choice of the correct terminology as the subject heading. This also depends to a certain extent upon the knowledge of the subject being indexed. It is the specific and not the general headings that should be used.

### Conclusion:

The term medicine is interpreted in the broadest sense and therefore medical journals, besides the obvious titles on medicine and public health, include journals on related disciplines such as biochemistry, pharmacy, nutrition, medicine and social psychology, dentistry, physiotherapy and nursing. Original reports form the bulk of information found in medical journals. Some of the reports may be largely observational or descriptive, but most of them are accounts of research done.

The compilation and the use of the index to journal articles involve two similar activities. One is the indexing, the input stage. The indexer deals with a document written in the author's natural language and translates it into indexing language. The other is the searching stage. The index user recognizes his need for information, translates his information needs into questions and translates his question into the language of the index. Both these activities involve reference to the subject authority list. In the field of medicine, the U.S. National Library of Medicine's MeSH is the most widely used tool internationally.

Medical journals are vitally important to physicians and medical researchers. The objectives of an index to journal articles are to assist the index users in locating documents and ultimately the information contained in the documents, as well as to increase the users' ability to work independently in the library.

### References:

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