TOWARDS EVOLVING A NATIONAL INFORMATION SYSTEM IN HEALTH AND MEDICAL SCIENCES

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1 NATURE & SCOPE

The temptation to assume that everyone knows what is meant by the term "National Information System" especially in a field like "Health and Medical Sciences" is very great. Leaving aside the professional jargon, it may be defined as a mechanism for the collection, processing, analysis and transmission of information for organization and operation of education, research and practice in the field of Health and Medical Sciences. The total effort is directed towards securing effective and prompt delivery of health care to each and every individual in the nation. A comprehensive approach in promoting primary health care within the context of National development efforts was approved by the World Health Assembly, and the member states have been urged to fully integrate the Primary Health Care both with the National Health System and with the other sections involved in Community development such as agriculture, education, public works, housing, and communications.

The canvas is thus very wide. Apart from the diagnostic and clinical data, we need to have demographic and environmental information, and data on morbidity, Health care needs, health resources and facilities, medical care utilization and the net result of all the health efforts. While the need for factual information in all these areas may be urgent for strategic planning for improving the Nation's health, we have to bear in mind the caution given by Fox (1973) [1] "though there is plenty of information available for comprehensive health planning, there is lack of a structured system for handling it". We therefore have to be very cautious in designing an information system which should be commensurate with the demonstrated and the anticipated demands of the biomedical community in the country. Our resources are very limited and as we all know, information services come at the lowest rung of priorities in the scheme of national development. So we have to be wise and plan our future system keeping in mind the resources available.

2 EXISTING FACILITIES

Any future system will therefore have to be built up on the existing infrastructure in the field of Health, Medicine and Family Planning howsoever inadequate it may be. The three major components of the existing system in the Health, Medicine and Family
Planning are: (i) Libraries attached to Medical Colleges, Research Institutions, Union & State Health Departments, Professional Associations and Societies, a few large Hospitals and some pharmaceutical firms, (ii) information contained in the published literature - books and periodicals, official as well as non-official reports and documents, audio-visuals (to a very limited extent), manuscripts, and (iii) users or clientele made up of students and teachers, research workers and practitioners, planners and administrators and large number of para-medical personnel.

3 MEDICAL LIBRARIES

There are over 260 Medical Libraries in the country. Most of these Libraries offer skeleton service to their clientele and suffer from all the typical disadvantages such as lack of space, inadequacy of financial support, dearth of trained staff, and the total lack of any training in the use of a library. The pace of development in these libraries is terribly slow with the result that they have not been able to create any visible impact on the delivery of Health Care in the country. The situation has been very well summed up by Dr. E. Brodman (1971) [2] "Often single handed with little support within their Organisation paid pitiful salaries, looked down on by professionals as mere clerks hemmed in by galling restrictions, and without the inspiration and support which a plentiful supply of library literature and attendance at professional meetings of a high level would give them, they still manage to serve, the cause by working hard, devising means to get around restrictions and difficulties and so gradually persuading the members of their institutions of the worth of Libraries. The difficulty of getting another staff member is as great as (getting) a computer". The only redeeming feature of this otherwise dismal picture is the establishment of the National Medical Library at New Delhi. The National Medical Library is yet to take up its role of leadership in the field of Medical Librarianship, as it has not yet come out of its teething troubles.

(ii) INFORMATION CONTENT:

The information explosion which we are currently experiencing is so vast and tremendous that now both the producers and the users are finding it difficult to handle it. Medicine is indebted to so many other disciplines of which it is an offshoot. But within itself also the approach has become multi-disciplinary among various specialities. Another complicating factor is the level at which information is required - the needs of a general practitioner are different from those of a nurse or an undergraduate Medical student or a teacher or a researcher. During last two decades the output of published literature in the field of Health and Medical Sciences has become just prolific and it is beyond the capacity of the best medical libraries to acquire even a sizable portion of this literature. No doubt Medical Sciences are one of the most organized in so far as bibliographical, indexing and abstracting services - are concerned. But how many libraries in India can afford to acquire all necessary reference tools which are so expensive. We are very much aware of the poor financial position of our Medical Libraries. Another dimension to this problem is added by the vast amount of literature which is not covered by any of the existing bibliographical aids. This is much more true in respect of Indian Literature in Health and Medical Sciences specially the indigenous systems of medicine. Not much attention is paid to cover the Health and Medical information published in non-medical publications. So the wide variety of publication media, inter-disciplinary approach, priority areas to be covered and the level at
which the output is to be fed to the users are some of the important considerations which we have to bear in mind in evolving an efficient information system for our country. Yet another important factor is the availability of foreign published literature in procuring which we spend so much time and money and whose applicability to the indigenous problems is controversial. We have just not been able to tide over this problem of speedy access to foreign published literature in India.

Apart from the published literature in the form of books and periodicals, quite an enormous data is compiled and produced at various levels. Some of the efforts to cover this data are notable such as Health Statistics of India, Vital Statistics of India, Census Reports, Survey of Current Interests in India, Annual Reports of Union and State Health and Medical Directorates. But otherwise very valuable data is created and lost in individual hospitals, institutions and departmental files as there is no central clearing house for information of such data - with the result that it is not available to potential users.

(iii) USERS:

The general apathy towards medical libraries in the country is reflected in the attitude of our Health Professionals. The practitioners usually have an attitude of being contented with their preliminary degree or diploma and very few of them keep up to date by subscribing to one or two professional journals. Teachers, research workers and post-graduate students who form bulk of the user community are not very persistent in demanding an effective information service to meet their requirements. The para-medical personnel are still worse off in this respect. Most of the Health Sciences Workers prefer to go without any information than pursue their efforts further, probably because they are too apprehensive of the limitations under which the Medical Library system operates in the country (Chitale and Bhatt) [3]. Large number of private practitioners - doctors, hakims, vaidyas and Homeopaths have no access to any medical library worth the name, nor have they any facility of continuing their education further. How can we expect them to deliver the goods effectively if we are unable to rejuvenate them with fresh knowledge, new techniques and methods.

Professional associations and societies also have not been equivocal in demanding efficient medical library service in the country.

It seems to us that the Biomedical Community in the Country have not involved themselves in evolving a need-based efficient information system.

4 PROPOSED SET-UP

An ideal information net work in Health and Medical Sciences may be utopia if one considers the enormous amount of fundings, necessary for evolving such a set-up. The quick pace of scientific and technological advancement no doubt has made available the most sophisticated hard and software to herald such a system and in fact efforts are already under way in evolving BCN (Biomedical Communications Network) at the Lister Hill Centre of the National Library of Medicine, U.S.A. But we in this country are yet to achieve certain pre-requisites for the existing infrastructure before attempting any such venture. Our limitations are very obvious and we have got to work with those till we have overcome them. We will now examine these pre-requisites one by one.
(i) **MEDICAL LIBRARY SYSTEM:**

Needs to be toned up. Financial, administrative and professional support will have to be mustered up to bring them up to a certain desirable level where they can render effective service to their readers. A comprehensive survey of existing medical libraries should be conducted so that a realistic libraries development plan can be drawn up. It should be undertaken by a high level committee which should among other things explore the areas of co-operative acquisition, cataloguing and bibliographical services. The Committee should draw up a master plan for the Medical Library network in the country. It should cover local, state, Regional and National Institutions. It may be re-emphasized that user community must be involved in this survey and planning.

(ii) The recent de-recognition of Indian Medical degrees by the General Medical Council of England has caused much furore, agony and dismay in our Medical fraternity who now realise that it is time to recondition our Medical Teaching to meet our own needs rather than to provide recruits for foreign health services. Medical Library and Information Services can play a vital role in our search for knowledge and technique which is more suitable to our own problems. The Statutory Councils, like Medical Council of India, Nursing Council, Dental Council, Pharmacy Council etc. should prescribe and insist on having a minimum essential provision for Library and information services in the budgets of the Institutions in their respective areas.

(iii) **HOSPITAL LIBRARIES**: need to be established in every State. In the initial stages matching grant should be provided for each hospital library established by the State. Patient Libraries which are conspicuous by their absence in India, also should be created with support of voluntary Organisation where possible.

(iv) The drug industry in the country could be advised to set aside a certain percentage of their total expenditure on research and publicity for the development of their own Libraries. In fact the National Medical Library, the Drug Industry and appropriate Research Institutes can join hands to initiate a Specialised Information Service on the Drug Literature in the Country.

(v) The doors of all categories of Medical Libraries should be opened to the Private Practitioners also. Professional Associations and Societies can also start subscription Libraries for the benefit of their members.

(vi) There is no facility for training in Medical Librarianship in the country. The National Medical Library should start the proposed Orientation course in Medical Librarianship without further delay. It is also desirable to include an optional paper on Medical Bibliography and terminology in the University Courses in Librarianship for those who wish to take up Medical Librarianship as their career.

(vii) A National Data Bank for Health & Medical Statistics must be created and if possible computerized system be introduced to store and retrieve the data. This could involve with profit those Organizations - Medical and non-medical which are already working on their own.
(viii) A fast Reprography Service is an integral part of any modern information system. While the valuable services rendered by INSDOC and other Institutions are recognized and appreciated by all of us, we need to supplement this service by providing more and more of such facilities at the National Medical Library and Postgraduate Medical Institutes so as to cope with ever increasing demand. The charges for this service should be kept as low as possible, subsidized if necessary, so that a genuine request is not dropped for financial constraints.

(ix) Translation services are equally slow and expensive to deter the most aspiring searcher. The ISTA (Indian Scientific Translators Association) and the National Medical Library could jointly evolve a scheme to make the translations available to the users quickly and at reasonable rates.

(x) Users Surveys may be conducted at various levels to identify their actual requirements and improvements in the service could be effected accordingly.

(xi) INDEXING & ABSTRACTING SERVICES:

Apart from the Local documentation lists and current awareness service bulletins at Institutional Levels, there are two noticeable efforts in the country namely Indian Science Abstracts by INSDOC and Index to Indian Medical Periodicals by the National Medical Library. The Health Literature Topics of the WHO, Geneva and Bibliography on Reproduction and Family Planning by the Regional Documentation Centre of SEARO, WHO, New Delhi are other useful services available to the users.

Coverage of Indian Literature in five major indexing andAbstracting Services of the World - namely EM, IM, BA, CA & PA - is very limited.

Thus we need to reorganise our indexing and abstracting services in such a fashion that the Indian Literature is adequately covered and brought to the notice of potential users quite fast. Areas of priorities should be identified and SDI (Selective Dissemination of Information) service should be initiated to feed the workers in their areas with latest information on regular basis. This task can be allocated to the respective institutions such as the NICD for Communicable Diseases, NIN (National Institute of Nutrition) for Malnutrition, NIFP (for Reproduction and Family Planning). But care should be taken to avoid duplication of efforts at all levels. There is no point in duplicating the efforts already being made at National and International Level.

Index to Indian Medical Periodicals could be made a monthly publication instead of half-yearly as at present. Annual cumulation could be issued. The National Medical Library is also planning to issue from 1976 a monthly current Awareness Bulletin to provide information in selected areas.

Time factor is very important in supplying any information to its user. At present there is a great time lag in printing of the Index to Indian Medical Periodicals. Efforts are afoot to reduce that gap and bring out this valuable publication up to date. There is a great need to computerize the index as it gives wide scope to store the information under various headings and sub-headings which is not possible in ordinary indexing.
UNION CATALOGUES:

Union Catalogues or Lists of Holdings of Libraries in any Region play a very important part in Library and Information Service. INSDOC & ICSSR have done a commendable job in this field. But the union catalogue of Medical Periodicals in Indian Libraries is lagging behind its last edition having been published in 1963. It is high time that a new edition be issued without further delay. It must be a continuous project and should be kept up to date by annual supplements. CCRIMH is also seized of the need for bringing out Union Catalogues of Publications in their field.

A Directory of institutions and Centres operating in the field of Health and Medical Sciences with emphasis on information and Library services should be compiled and published as soon as possible by the ICMR/NML Collaboration.

All these pre-requisites call for vigorous and simultaneous action on all these fronts. Once this viable infrastructure is built up, further developments to establish a really efficient operative system will follow logically and smoothly. The NCST Plan for Science and Technology Information Service include the Health and Medical Sciences as well and therefore it is reasonable to expect that the Medical Library System would also benefit from it and utilize the additional resources thus made available to improve its services. "Collaborate or collapse" the slogan coined by Advani (1974) [4] very aptly describes the motto around which we must muster our efforts if we desire to achieve our cherished goal of placing right information at right time and place in the hands of our dear readers.

REFERENCES