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Report on a Working Group

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The Group was welcomed on behalf of the DDR Minister of Health by Dr Katrin Schiombach, Ministry of Health. Dr M.C. Thuriaux, Scientist, Health and Biomedical Documentation, WHO Regional Office for Europe, conveyed the greetings of Dr J.E. Asvall, Regional Director. Professor P. Weiss, Director, Institut für Wissenschaftsinformation in der Medizin, Berlin, was elected chairman and Mr C. Perry rapporteur.

The present meeting is in the continuation of earlier efforts by WHO to improve the provision of adequate documentation to health managers in the general framework of national health information systems. In 1978, the World Health Assembly adopted Resolution WHA 31.20, urging Member States to "develop or strengthen their health information systems so as to provide adequate support to their management processes for health development and to contribute to the international exchange of health and related information". Document NHIS/80.1, Rev. 1 (Guiding principles for National Health Information Systems), was prepared as a follow-up to this resolution, and among the Targets adopted by the Regional Committee for Europe in 1984 in support of the Regional strategy for HFA 2000 in Europe, Target 35 states:

BEFORE 1990, MEMBER STATES SHOULD HAVE HEALTH INFORMATION SYSTEMS CAPABLE OF SUPPORTING THEIR NATIONAL STRATEGIES FOR HEALTH FOR ALL.

and goes on to state that "decision-makers are increasingly aware of the need for up-to-date information for managerial purposes at all health service levels. National information systems are thus a key element of the managerial process for national health development (MPNHD)."

Professor Weiss gave an overview of health information for management in Europe and the activities of the Institut für Wissenschaftsinformation in der Medizin (IWIM). He noted that services provided by IWIM are well received by users and that one result of IWIM's activities has been an increased awareness of the importance and value of information. Complementing this overview were reports, indicating some aspects of information systems and provision in Bulgaria, FRG, UK and USSR. From these reports it is clear that the problem of health management information is increasingly acknowledged and that several different strategies have been devised to deal with it. These strategies include bibliographic services such as HECLINET, HELMIS, MEDIK and specialized information services specifically aimed at health management personnel (e.g. VNIIMI, IWIM, CNIMZ).

1. Information users

Users of health management information do not constitute homogenous groups; they can nevertheless be considered for convenience as occupying one or more of the following major categories:

- policy decision makers
- programme initiators/major change initiators
- programme/project managers at
 - international and supranational level
 - national level
 - regional level
 - local level

Information services are sometimes tailored to suit the requirements of a stereotype user, but there is a danger that strict adherence to such a hypothetical norm will result in services which in reality are inappropriate to some degree for all users.

While it is perceived by some that "users do not always know what they need or if they do have difficulty in expressing it", this does not sum up the whole situation. Management information needs can be considered under the following headings:

- information content and its degree of specificity;
- information quality, its reliability, relevance, timeliness, currency;
- presentation: reduction in quantity, provision of abstracts, reviews, comprehensibility.

Providing adequate answers to the information needs of those involved in management requires a precise understanding of management structures and processes, some of which may remain ill-understood. This problem is compounded the more innovative decision making becomes.

Information users and providers are not mutually exclusive groups; users can also be creators or providers and vice-versa. Information providers and health managers must cooperate in identifying those areas where change is likely to occur and where new types of information will be needed. Two approaches of immediate interest in the improvement of this cooperation are:

- joint identification by managers and information providers of areas where needs are likely to change in amount or nature;
- user education aimed at producing realistic expectations in managers with regard to information.

Most mechanisms for assessing trends in information needs tend to be reactive, based on a monitoring of the users' questions. Active identification of possible trends tends to occur mainly in documentation organizations dealing with structured plans and programmes for health, either at the national level or through contractual research work undertaken by the documentation organization itself in connexion with institutes of public health, Ministries of Health, etc. The identification of a trend and/or the decision to follow this trend in information can be based on:

- the insertion/deletion of the problem in/from existing plans and programmes;
- increase/decrease in users' questions on a given topic;
- expert advice.

Feedback from users in form of anecdotal comment is probably the most common response for evaluation, but this is of limited value. The meeting acknowledged the importance of identifying methods to assess the value of information as perceived by the users (this could be done for instance by assessing the level of expenditure which the users are prepared to provide for information, or by identifying the influence of specific items of information on decisions).

There is little application of the tools of bibliometrics such as citations analysis in the areas of health management. The use of such tools may have to be investigated as a measure of developing "research fronts", in the same way that tools such as the Science Citation Index of the Institute for Scientific Information are being developed for overall scientific research.

2. Documentation sources

Most organizations engaged in the provision of documentation have established core sources of information. These include:

- abstracting and indexing sources, either printed or online, used for ad hoc or systematic scanning;
- core sets of journals which are scanned regularly - these sets can range in numbers from a few "general interest" journals to over 400;
- scanning of national monographs, reports and fugitive literature;
- analysis of national plans and programmes, more as an indication of areas requiring documentation than as a source of documentation per se;

Some of the problems in identifying sources of documentation are:

- listing of a core source of journals and coverage of national publications;
- covering literature and ensuring translations for languages which are not generally accessible to health managers;
- relative importance of fugitive literature, particularly as regards research and government reports, and the problems in covering such literature where relevant.

The MEDINFORM system in the CMEA countries provides an example of a unified international approach to information provision comprising a stratified national service which also offers access to an international network for the exchange of national medical literature. Users of the system are thus able to obtain references to, and copies of, items held elsewhere. MEDINFORM consists of:

- MEDIC database covering over 300 medical journals;
- the MEDPERIODIC database covering the subject scope and location of all biomedical journals held by member countries;
- a legal database and a reference information file.

Priority has been given to primary sources and automated information services in order to assure the currency and comprehensiveness of subject coverage. Special importance has also been attached to analytically and synthetically processed information. Surveys of the literature are published as leading articles and in their own right.

The HELMIS database being developed at the Nuffield Centre for Health Services Studies, Leeds University, is an example of an information service intended to meet users needs reactively and proactively. The database covers core areas of health service management, health economics, planning and manpower, and additionally the peripheral areas of industrial relations, social policy, and management and organization theory. Records held in HELMIS relate to the contents of the Nuffield Centre Library, and are being added at a rate of 5.500 per annum. Over 50% of records are journal articles and of these over 90% contain abstracts produced by information staff at the Centre. A backfile of some 25.000 items is expected to be added by 1987. Services at present consist of a fortnightly current awareness bulletin, bibliographies and subject searches on demand, and document delivery back up in the form of loans and photocopies. On-line access is currently restricted to in-house users, but this facility should be extended to National Health Service staff in the near future.

The HECLINET system (Health Care Information Network) regroups organizations from Austria, Denmark, FRG, Poland, Sweden, Switzerland. It covers the non-clinical aspects of the hospital and health care, health economics, hospital building, maintenance, financing, hygiene, politics, administration, regional planning and structure, personnel administration and education, and legal aspects. It has entered about 58.000 citations since 1969, in all languages (50% German, 30% English). 80% are derived from journals; the annual growth rate is approximately 4.500 references. The unit record contains information about author, architect, title, and other bibliographic data, controlled vocabulary terms, geographical terms, additional subject information and abstract (for 30% of entries). Original titles are included, and an English version of the thesaurus is in preparation.

Discussion

The scale of production of literature in the health and medical fields has sometimes been referred to as an information explosion. Figures based on various interpretations of serial publications have been put forward to support this view but precise statistics are seldom available. Nevertheless, information output is substantial and increasing. Suggestions have also been made that information users effectively ignore as much as 95% of original papers, but again few studies have been made to support or refute such claims. These two claims - the first accepted with qualifications, the second possibly erring on the pessimistic side - give some indication of the problem faced by information service providers.

Further complications occur when the use of information sources such as television and radio, normally beyond the scope of information services, is considered. Demands on more conventional services may therefore be made by users initially alerted to specific topics by the mass media. Authors will increasingly have to consider the value of secondary literature and the production of reviews, abstracts and analyses as a vehicle for the communication of primary sources in a value added activity which will be of growing importance to information users and providers alike.

The widespread availability of data processing technology has fostered the recent development of factual databases. Similarly, videotex has been used by the pharmaceutical industry in several countries, although there are limitations on the use of this technology for bibliographic data, not least because of the poor resolution of television screens which restricts the amount of information which can be displayed. The likelihood of a change of emphasis from printed to electronic sources has also been noted. Online scientific magazines as sources of very current information in conjunction with the primary literature can be used to produce a useful synthesis of recent thinking on particular topics. The existence of the BMA Reports database which offers full text online was noted with interest.

The establishment of information services presupposes easy access to, and appropriate selection of, the sources on which services could be based. In this context, the identification of a core list of journals for health management in the European Region, possibly based on a comparison of existing national lists and of the selection criteria used in the compilation, may prove to be a valuable activity. During discussions a study of the information sources used by health managers was suggested to identify why some are considered valuable and what penalties, if any, their non-use may be said to entail. Member States of the European Region are faced with the practical problem of the limitations set by the different languages used. Translation is an expensive and slow process which has not addressed the fundamental nature of the problem, even though particular institutions and national libraries continue to undertake considerable work in this area. The trend towards the provision of summaries of articles in languages other than that of the original article should be encouraged.

The area defined as grey literature was singled out for particular consideration, "grey literature" being a blanket term for an amorphous mass of data by its nature difficult to quantify, and of which only a small proportion has more than transitory or local interest. Different approaches have been taken by different systems: the decision to include or exclude items is generally based on perceived value rather than on more objective criteria. A filtering method is needed and some suggestions on how this could be achieved were made:

- assessing the status of the issuing body;
- comparison with subject counterparts in the normally published literature (including the absence of such counterparts).

The experience of organizations such as the International Labour Organization could also be sought. The proposed WHO EURODOC system should improve access to grey literature originated or held by WHO. In this context there is a need to improve the documentation of WHO's own publication programme both at Headquarters and Regional Office levels.

3. Processing of documentation and information

An overview relating some of the theoretical concepts underlying documentation and information handling suggested that information systems may be considered as undertaking two interrelated areas of activity:

- at the practical level, documentation is accessioned, catalogued, classified, and ultimately disseminated;
- at the analytical level, abstracts are created, documentation and information source selectively brought to the immediate notice of users, translations produced, literature studies completed and databases compiled.

The main source for reduction and synthesis lies in the abstracts provided by the authors to the abstracting service. Some organizations (IWIM, CNIM2) provide more than such an abstract. They have developed guidelines for the writing of such "improved" abstracts, usually undertaken in the light of current health priorities as embodied in health plans and programmes. One problem is that of expressing information in such a way that it can provide indications for future action. Usually, these indications are not explicitly embodied in the abstracts, although some institutions are attempting to do so.

The application of systems analysis may be inseparable from the development of a more scientific approach to information service provision. The actions of repackaging, processing, and synthesis of information from its original form in order to provide forms suitable for different users constitute an increasingly important part of information service provision. The core of knowledge involved remains the same but the selection criteria and methods of presentation should be varied in relation to the characteristics and requirements which can also change within user groups. To satisfy these requirements effectively, more knowledge about the processes of information use must be obtained, together with an awareness of limitations in the corpus of knowledge - the so called "knowledge gaps".

Some of the mechanisms employed in the HELMIS database were identified to show how information services have developed from traditional library activities. These mechanisms include:

- more effective stock use resulting from improved indexing techniques;
- creation of indicative abstracts capable of acting as indicators of the potential value of a given item;
- introduction of a proactive system using data processing technology including direct online access for end users and intermediaries;
- provision of services tailored to individual user needs, particularly the development of SDI profiles;
- development of a document delivery system to complement the provision of references in an integrated service.

Discussion

The value of abstracts provided by authors was considered together with the criteria used for their inclusion. In most cases, authors' own summaries were of little use compared with those produced by information services, even taking into account the higher cost involved. In some cases, specific reports in the form of literature reviews have been produced as series offering in-depth coverage of specific topics. The use of good abstracting techniques is an essential prerequisite and consequently the need for some means of abstract evaluation is inescapable. The time lag between primary and secondary sources could be reduced both by increasing the use of online systems and by the simultaneous publication of abstract references in both sources. However, this would involve a shift in editorial control towards the editorial boards of primary journals and away from the information systems which are frequently responsible for secondary literature at present. A new type of information for managers beyond the traditional library-based literature documentation services providing synthetic and/or evaluated information depends on collaboration between documentation officers, health managers and medical and public health specialists; this also allows for assessment of trends through qualified monitoring of literature. Thesauri are a means of achieving controlled indexing in online systems and have some potential for automatic translation. The balance between the quantity and relevance of articles recalled in online systems is further complicated by the different needs, abilities, and expectations of users; consequently a mixture of controlled and free indexing terms will be required in most systems, although the analytical workload at the input stage will inevitably be higher.

4. Postgraduate education of health managers in the DDR

Professor Spies introduced a review of developments in this field which stressed the importance attached to the creation of a critical mass of health managers and leaders in the strategy of HFA 2000. The six-month training scheme for District Medical Officers was outlined together with some of the general problems associated with management education, including the development of measures of effectiveness and appropriateness, the recruitment of suitable participants, the identification of relevance to activities of normal life, the relationship between the knowledge base and the practical application of such knowledge for management decision making and problem solving and the need for an information input (to indicate to participants the type of services available to them).

Discussion

The establishment of effective information services rests at least as much on user education as on the organization of information in useful formats. Health managers should understand what information services can and cannot do in order to have realistic expectations. The need for a closer dialogue between users and providers was stressed, and while the steps taken in some countries to achieve this were encouraging, considerably more work still needed to be done.

5. Proposals for action, 1985-1987

The following proposals were discussed and accepted by the participants:

5.1. The Regional Office should investigate the possibility of sponsoring at least one and preferably two meetings (workshops) in 1986-87, at which health librarians and providers of health information could cooperate with health managers in the identification of common interests and joint areas for research.

5.2. With the assistance of institutions from the Region, the Regional Office should continue to identify institutions providing health information services and sources in the Region appropriate for health management information and documentation and encourage cooperation between these institutions. By 1986, the Regional Office will have established a roster of such institutions, including databases produced by them, and will ensure regular circulation of new developments between those institutions. Examples of such institutions and bases are HECLINET, MEDINFORM, RAMIS, HELMIS - an initial step would be for these institutions and bases to increase their collaboration and report informally on this by 1986.

5.3. Sources of information

5.3.1. Grey literature

National authorities should establish a focal point or focal points to identify, assess and if relevant index national "grey literature". As an initial step, CNIM2, IWIM, VNIIMI, HELMIS and HECLINET will report to EURO by the end of 1985 on the feasibility of this approach. EURO will approach bases such as SIGLE (EEC) and CIS (ILO) to ascertain the possibilities of joint work in this field (e.g. by providing for insertion in other data bases of grey literature of more than local interest).

5.3.2. Journals

The institutions participating in the meeting will provide HDS/EURO by August 1985 with a list of those journals which are systematically scanned and/or indexed; with the assistance of IWIM, these lists will be compared in order to extract a set of journals systematically used in a majority of cases, together with a second identification of journals of regional or national interest. This list will be circulated by September 1985 to all participants of the meeting for comments and, if appropriate, will be circulated as an indicative basic list to Member States for use, assessment and periodic revision.

5.3.3. Evaluation

Evaluation of the use of information, particularly in the case of bibliographic searches, is hampered by the lack of appropriate instruments and protocols for feedback. HELMIS has agreed to investigate the feasibility of developing such a protocol and providing it to EURO by spring 1986 for dissemination to other similar providers of information and evaluation.

5.3.4. General

There is a need to identify the various sources used by health managers and if possible quantify their relative importance. One example of such activity is the assessment of the mass media as a source of information. VNIIMI and possibly CNIMZ may be able to provide further feedback on this to the Health Documentation Services of the Regional Office.

6. Recommendations to countries and national institutions

- 6.1. Develop health information capabilities including use of literature, in close liaison with senior health management, in support of Target 35 of the Regional Strategy towards HFA 2000.
- 6.2. Encourage research on the information-seeking behaviour and on the information needs of health managers, and on the application of documentation to decision-making.
- 6.3. Facilitate the use and improvement of data bases dealing with various aspects of health management and promote collaboration between these bases.
- 6.4. Facilitate coordination between the various types of health information (e.g. statistical, legislative and scientific) in the provision of information to health managers.
- 6.5. Introduce or emphasize adequate training in the identification, selection, analysis and use of health documentation and information for health personnel at all levels, and particularly in the training of those responsible for health management.

7. Recommendations to WHO

- 7.1. WHO should encourage national health administrations in the development and improvement of health information and documentation services for health management. Individual programmes should pay greater attention to activities in dissemination and use of information and documentation services for health management.
- 7.2. The Regional Office of WHO for Europe should make full use of its own health documentation and information potential for programme management and evaluation, and should increase the use of this potential by the health community.
- 7.3. WHO should sponsor regular meetings between health managers and providers of health information from various countries in order to familiarize each group with the requirements and potential assistance to be expected from the other.
- 7.4. With the assistance of Member States, WHO should consistently monitor the dissemination and use of its own publications and facilitate access to these through standardization of publication format, clear identification of the publication, the use of indexes to catalogues and adequate publicity, and online bibliographic control.

ENCLS: List of participants

Further background available in Health Documentation Services, WHO Regional Office for Europe.

ANNEX 1

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