

Concurring session 2A  
Information for primary health care:  
a round table

Chair  
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## SANTÉ POUR TOUS: UN DÉFI POUR LES CENTRES D'INFORMATION DES SOINS DE SANTÉ PRIMAIRES

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### 1. INTRODUCTION

Au monde, ce qui compte c'est l'homme, les hommes: ses espérances et ses craintes, ses projects, ses échecs.

Si l'on s'occupe de santé, comme c'est notre cas, celà semble tellement évident que l'OMS l'a défini comme un bien être total: physique, mental et social. Laissant de côté ce que cette définition a de rêve (et d'ambiguïté) ce qui s'en déduit est fondamental pour notre pratique professionnelle.

Et c'est dans cet esprit qu'apparait, en 1978, à la Conférence d'Alma Ata, le concept de Soins de Santé Primaires (SSP). "On entend par SSP des soins de santé essentiels universellement accessibles à tous les individus et à toutes les familles de la communauté par des moyens qui leur sont acceptables, avec leur pleine participation et à un coût abordable par la communauté et le pays. Les SSP sont partie intégrante du système de santé du pays, dont ils constituent le noyau, ainsi que du développement social et économique global de la communauté"<sup>(1)</sup>.

Malgré l'acceptation par les gouvernements de cette définition ainsi que des buts et stratégies qui s'en déduisent, on voit que, par des raisons historiques, économiques et politiques, les préoccupations dans notre domaine de travail - intimement lié aux systèmes de santé et à la de préparation de ses personnels - s'adressent, généralement, à la satisfaction des besoins des professionnels des soins de santé spécialisés, hautement spécialisés et aux investigateurs, justement ceux qui ont plus de ressources disponibles et en utilisent plus<sup>(3)</sup>, et tant mieux si, pour le faire, on dispose d'un centre de documentation le plus sophistiqué possible.

On s'en doute qu'avec cette orientation on puisse arriver a payer la lourde note qui s'en suit, et, surtout, a l'équité que tout le monde défend et qui a été résumée dans la formule "Santé pour tous a l'année 2 000" (SPT).

La philosophie et buts sousjacents a ce concept constituent un sérieux défi aux objectifs et modes de fonctionnement des centres de documentation/ /information de santé: "Avant 1990 les États Membres devraient s'être do-

tés de systèmes d'information pouvant soutenir leurs stratégies SPT" (2).

C'est dans cet esprit qui naît au Portugal le réseau de documentation/information de SSP dont je présenterai quelques traits comme exemple d'un effort pour contrecarrer la situation décrite par P. Weiss (3) comme commune à toute l'Europe.

## 2. UN RÉSEAU DOCUMENTATION/INFORMATION AUX SSP

Les centres de documentation/information accompagnent, naturellement, les systèmes de santé et de formation des personnels mais, si les SSP sont considérés dès 1979 le noyau du Service National de Santé portugais ils ne disposaient, jusqu'en 1985, que de quelques bibliothèques qui s'ignoraient les unes les autres et dont le peu de personnel n'avait, pour le général, aucune formation spécifique.

Cette situation était d'autant plus grave que l'on sait qu'aux SSP on a comme utilisateurs dès tous les professionnels de ses services aux professionnels d'autres institutions concernées, jusqu'à la population en général; que les services sont très dispersés ayant à voir avec des réalités très différentes; que le profil professionnel de ses personnels n'est pas toujours accordé avec les besoins des SSP (notamment les médecins, dont la préparation à l'université continue à avoir comme objectif l'hôpital et le cas individuel le plus exotique possible).

Une étude détaillée sur les habitudes de lecture de médecins et d'infirmières des Centres de Santé (CS) du Portugal (4) nous confirme les données de P. WEISS (3) pour l'Europe: on ne lit pas assez, surtout les infirmières (ayant celles-ci, en plus, une capacité assez réduite d'utilisation des faibles ressources dont elles disposent); l'accès aux documents se fait d'abord par achat, en 2<sup>ème</sup> place par l'offre des laboratoires de médicaments et, seulement après, par bibliothèques. On a aussi constaté que les documents normatifs fondamentaux pour l'action des Centres de Santé dans les secteurs de santé prioritaires n'étaient que très peu lus.

Je voudrai maintenant mettre en discussion la voie choisie pour répondre à cette situation me bornant à résumer les principes et la stratégie qui, partant de cette réalité, ont orienté ces 3 années de travail (1985-1988).

## 2.1. - PRINCIPES

- . Le but de notre action c'est l'augmentation du bien-être de la population - individus, familles, communautés. Pour celà, l'action du personnel des CS - surtout médecins et infirmières - est décisive. Donc, ces deux types de professionnels sont nos utilisateurs prioritaires.
- . On ne doit pas créer un système hiérarchique de Centres de Documentation et Information (CDI), mais un réseau ouvert, où chaque niveau a des fonctions différentes.
- . Pour rentabiliser temps, intelligences et budget il faut profiter, au maximum, de l'expérience et des moyens des autres. Ainsi, on ne doit pas prendre des décisions d'organisation, de choix de processus et d'outils de travail sans connaître ce qui se fait au Portugal (d'abord) et à l'étranger, essayant d'établir la plus de collaboration utile entre tous.
- . En documentation/information le grand problème est de mentalité et pas de budget ou même connaissances techniques. Ainsi, la structuration et le développement de ce réseau doivent être basés sur un permanent processus pédagogique, déclencheur de créativité et qui amène à un approfondissement de conscience du rôle de chacun.
- . Si "La charité bien comprise commence chez soi", la SPT doit commencer aux CDI mêmes. C'est-à-dire, qu'il est pour nous de la plus grande importance que le travail puisse donner du plaisir, conciliant même des moments de fête aux CDI comme prophylaxie de la betise.

## 2.2. - STRATÉGIE

- . Les fonctions documentation/information s'intègrent aux 3 niveaux du réseau de services de SSP notamment en ce qui concerne les plans et les programmes d'activités.
- . On a organisé le réseau commençant du niveau central pour le local pour arriver à l'autre échelon avec un minimum de crédibilité et de capacité "diplomatique" près des directions de chaque Administration Régionale de Santé et chaque CS, donnant priorité aux CDI plus dynamiques pour qu'ils aient un effet démonstrateur et d'appui près des autres.

Au CS ont n'a pas des CDI mais, dans cette première étape, des animateurs de la lecture, dont les interventions doivent partir des programmes de santé de CS et des intérêts spécifiques de chaque utilisateur potentiel.

- . L'adoption de règles communes de travail pour tout le réseau se fait, non par imposition du niveau central, mais par un lent, mais plus sûr, processus de formation qui mène à des consensus.
  - . La connaissance des utilisateurs se fait non seulement par des études mais aussi par la relation directe, ce qu'oblige à aller jusqu'au petit CS, à savoir écouter et voir, laissant de côté les idées toutes faites en bureau.
- Pour sa formation on profite de ces contacts et des actions de formation en service sur d'autres thèmes.

### 3. CONCLUSIONS

Réfléchir sur documentation/information de santé nous oblige à connaître la réalité du système de santé du pays, le(s) système(s) de préparation des personnels, les choix politiques envisagés par les pouvoirs, mais aussi la réalité historique et culturelle de laquelle nous faisons partie.

Seulement ainsi nous pouvons comprendre la portée de notre travail et de notre pouvoir sur l'évolution de cette même réalité.

Si ces traits sur le réseau de CDI des SSP ont quelque intérêt, c'est justement parce-qu'il se veut constamment défié par une philosophie de santé gratuite en termes des réalités du pays.

Et c'est en ce sens que j'aimerais poser, en sorte de conclusion, quelques questions qui nous préoccupent.

- . La philosophie des SSP sera-t-elle une marchandise bonne comme panacée pour le tiers monde ou, sera-t-elle, à l'échelle mondiale, prometteuse d'autres relations en société plus accordées aux espérances profondes de l'homme, avec des effets concrets dans les systèmes de santé et d'information de santé?
- . Outre accroître nos connaissances techniques, n'avons nous pas besoin de comprendre quel rôle notre CDI joue, comme petite pièce du grand *puzzle*

des influences pour maintenir ou changer, dans une ou autre direction, le système de santé de notre pays?

Dans le même sens, pourrions-nous considérer neutrales les choix que, tous les jours, nous avons à faire dans notre travail?

Par exemple, les généreuses offres des multinationales de l'information ne sont-elles des cadeaux empoisonnés ayant comme but, à l'exemple des multinationales pharmaceutiques, s'en servir de notre ingénuité ou complaisance?

Ces questions s'en déduisent, d'ailleurs, des orientations courrantes en notre domaine de travail: si personne ne veut plus de bibliothèques-magasins c'est qu'on a choisi d'être vivants, créatifs et intervenants.

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Concurrent session 2B

National cooperation

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## ITALIAN LIBRARY NETWORK

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This paper is not intended to be, nor could it be, an exhaustive treatise on the Italian Library Network (SBN); others who are more familiar with it and who have worked towards its creation can do this better than I can; what I have to say to you is only meant to draw your attention to an extremely ambitious project which will change the whole nature of the work of the librarian, who in many cases up till now has jealously guarded the collection he administers and who is often unaware of the possibilities for development in his own profession.

As has already been said on other occasions, for instances at Ravenna during the conference on "The SBN and automated library networks" in 1986, new technology is bringing us towards a different type of service and a renewed awareness: the librarian's fields of action are opening up and he is no longer merely the administrator of his own stock but is becoming, with all the other librarians in the country, a person who is familiar with and helps to administer the entire book patrimony, not only of his region but of the whole nation.

In this perspective therefore, a library which is unable to function properly is a responsibility to be shared: an obligation by right to be taken in hand by all librarians.

With the administrative decentralisation realized in Italy on a regional basis and the resulting fragmentation of the books patrimony, on one hand at a local level it became of greater value and use, but on the other hand a large number of different operating systems sprang up, often not compatible with each other with regard to administrative matters; in the '70's in fact a whole series of different software programmes was elaborated and put into use, created by universities, libraries or firms, to speed up and improve the research procedures: all various independent programmes however, suitable for resolving local problems but obviously, in almost all cases, with no possibility for dialogue or interaction.

At the beginning of the '80's the need to form a national, integrated, automated library service began to be felt, and was then created by the Central Institute for the Union Catalogue and by an 'ad hoc' ministerial committee.

The aims of the project were principally to obtain bibliographic information, to offer the possibility of tracing documents anywhere in the country and make them available by using new technology and a network of library services covering the whole nation.

The distinctive feature of the system, which makes it different from all the others preceding it, is that it is a "cooperative"

scheme; the basis of it is that the organisation and resources of every library which becomes a service unit, join together to form a whole which allows a complete knowledge of, and access to, the national heritage of books.

For this to be feasible it was necessary for it to undertake, as a governing policy, a bibliographic control intended to guarantee the necessary instruments for the cultural and professional development of the citizen; and also for it to acknowledge that "the national, regional and local authorities must cooperate to achieve this goal"; these points were made in the final resolution of the "National Conference for the implementation of the SBN", and were confirmed by the points arising from the work of the ministerial committee which underlined the necessity for the project to respect the decentralized political and administrative system and at the same time the coordinating functions which are to be performed by the State, through the Central Institute for the Union Catalogue (ICCU).

For this objective to be realised it was necessary to identify the technical and functional specifications to fulfil the policy of the service.

- In order to establish a system of communication between the libraries it was necessary to use standard procedures to facilitate the use of different types of hardware.
- The service had to be able to be developed and changed without having to re-elaborate the entire system every time.
- It was essential to keep in mind the fact that the hardware was decentralised; the local data bases had to be connected to each other and each one had to be accessible to every point connected.
- It was also essential to have a central reference point, a point for coordinating and sorting all the requests, to which the local data bases might refer in the course of their work, both in the micro and the macro systems (In effect the project system does not provide for direct communication among the poles but rather that all the data flows should pass through the index system. The index is therefore a guarantee of the coherence of the data contents of single local data-bases, at a national level, and satisfies central type functions).
- Lastly a public, nationwide network had to be created, to link up the various local sub-systems.

With a structure of this type it was intended to create a catalogue with a single conceptual basis but physically spread over many points, which would allow the user, through any library in the system, immediate access to the entire Italian patrimony of books; it would therefore be library envisaged by the Community committee.

Setting such a vast mechanism in motion was neither quick nor easy, but the precision with which the study groups have worked right from the beginning, and the professionalism and steadfastness which have been brought into play both at a regional and a national level to achieve the goal, are beginning to bear fruit. The political and administrative

decentralisation which took place in Italy placed on the individual regions the task of administering most of the patrimony of books, and to them also was entrusted the macro-analysis elaborated by the Central Institute for the Union Catalogue, after they became part of the SBN; in the agreement of 1984 between the Ministry and the regions, in fact, the links between the State and the regions were defined, with regard to a national library service. It has been, therefore, and will be in the future the task of the regional offices to define the features on the basis of which the SBN will be developed in the individual localities.

- At the present time there are four local development points:
- The first is the National Central Library of Florence, which is also where the pilot study of the Ministry was conducted. The hardware used is a DPS7 Honeywell. Similar systems are functioning also in some of the libraries of the University of Florence.
  - The second and third points are represented by the regions of Lombardia and Piemonte which in collaboration with each other develop the SBN procedures, using an Adabas-Natural IBM compatible software. Our library is also experimenting with this system.
  - The fourth point is Ravenna in the region Emilia-Romagna. The hardware used is Unysis 1100/62.

Another point has joined itself into this one: Ferrara, also in the region Emilia-Romagna, using IBM hardware.

However the regions which developed the software are not the only ones to have come into the SBN; in fact the following regions are now in the system: Emilia-Romagna, Lombardia, Piemonte, Sicilia, Tuscany, Umbria.

In just a few years the SBN has become a reality, functioning all over the country, although in this short time it has not been possible for the advantages to have been fully appreciated, advantages which will be brought about by the setting-up of the network and the index.

In this second part of my paper I would like to outline the reasons which induced us to become part of the SBN; the statistics of the quantity and the type of services provided by our library, which may serve to give a better understanding of our situation, are on the sheet attached.

The library of the Faculty of Medicine and Surgery "A. Gemelli" is a central library, founded in the '60's at the same time as the Faculty, and has a book stock which can be considered noteworthy although not exceptional, and the number of users is one of the highest of libraries in Rome.

At the end of the '70's our library, like many others, began to think of ways to improve its administrative procedures, to make better use of its own stock by using new technology, and to insert itself in a wider network of communications. The various automated systems elaborated locally by firms and universities, although they solved perfectly the local problems, and maybe even because of this, did not seem to us to be suitable for providing us with the wider outlook necessary for resolving the research problems of a university; on the

other hand most of other systems, wider-ranging and already functioning both in this country and abroad, did not allow a link-up within the network which would guarantee the sharing of the classifying and cataloguing operations and of the documentary resources, in order to identify and make use of a specific document.

The setting-up of the SBN by the ICCU, on the order of the Ministry for Cultural and Environmental Assets, a system which I have the pleasure of following, even if as an its outsider, in all various phases, led me to carry out an in depth study and finally to request from the Lombardia region the software used by them.

At that point a complete revision of the procedures was initiated: the need for standardisation, the importance of collaboration, the sharing of resources - the essential basis for research no longer limited to one single collection - made it necessary for the staff operating in the individual sectors to have a basic homogeneous training so that the impact, psychologically and otherwise, with the new system should be as easy as possible.

In our case, as the library was fairly recently founded and the staff mostly from other sectors of the university (only a few had followed specific training courses), it was considered essential to have all the staff take part in a professional training and up-dating course, which lasted three months, given by staff of the National Library of Rome with the help of two psychologists from the Faculty.

At the same time a committee of 3, later 4, members was formed, made up of the Director, the Deputy Director and two cataloguers, who made an in-depth study of the "Guide to cataloguing with particular reference to the SBN" drawn up by ICCU; the same committee was given the task of studying the changes necessary to the card catalogue to bring it into line with the "Italian rules for cataloguing by author", since our library, from its beginnings, had used the cataloguing rules of the Vatican Library.

After these preliminary studies and when the Lombardia region had agreed in principle to our entering into SBN, it was necessary to go over both with ICCU and with the region all the preparatory work done, and then an introductory course was organised, lasting two days, which allowed our first contact with the programme which was already functioning in Milan.

In the period at the end of '86 and the beginning of '87 the first part of the SBN software was obtained and a plan of action was drawn up with ICCU, to revise completely all the cataloguing rules for the SBN.

In May 1987 in a three-day course in Milan, the entire working programme was demonstrated and in June of the same year a seminar on "Cataloguing in the SBN" was held in our Faculty, given by lecturers from the ICCU, specifically for the four members of the Committee who had previously made an analysis of the Manual.

Since the second half of 1987 we have continued experimenting with the programme in its most complete version, even though it

is not yet definitive, and three courses have been held to refine the operating techniques.

The tests carried out up till now have reconfirmed the high quality of the product and the research possibilities it offers; the final version of the software, elaborated by the Lombardia and Piemonte regions, received just in the last few days, will allow us, in the next three or four months, to put at the disposal of our users a faster and more detailed information service regarding new accessions.

The great step forward in the quality of the service will be felt above all in the near future when with the shared catalogue, made possible by the setting in motion of the national network, and with the index, every librarian will collaborate in the realisation of the "Union Catalogue of National Library resources".

## STRUCTURE AND SERVICES PROVIDED BY OUR LIBRARY

Reading rooms	4
Arca of the reading rooms (sp. m.)	2112
Area of the centralized depot (sq. m.)	551
Books	212.445
Periodicals	6.244
Current subscriptions	3.812
Photocopy machines	7
Annual photocopies	1.228.904
Daily users	750

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#### COOPERATIVE EFFORTS IN THE COMPUTERIZATION OF THE MEDICAL LIBRARY NETWORK IN HUNGARY

While libraries are directly dependent on the realities of national economy, a given society, in determining the volume of financial support allocated to the library system, has to be aware of the inherent risks and responsibilities of both short-term and long-range planning. The crux of the dilemma lies in the choice between the more tempting present-oriented objectives and the apparently less certain and usually more capital-intensive future goals.

In Hungary, institutions of health have followed the path of professional integration for years. In 1956, the first comprehensive regulation of the libraries in the country decreed the uniform composition of the library system and sanctioned the existing partial networks. These technical, educational, medical and other networks tended to follow institutional, sectoral, or administrative patterns.

The cooperative efforts my title mentions are a relatively recent set of changes. After 1945, the tendency towards total centralization sooner or later proved to be counterproductive to the life of the community. The ripple effects of the "new economic mechanism", which was launched in 1968, came to affect libraries as well, and in the early 1970's new legislation was enacted, which reinforced new forms of co-operation in acquisitions policy. By the late 1970's, this mode of collaboration had been further expanded to lend a professional or regional focus to the former network system.

These years also saw a considerable increase in quantitative growth which, by the end of the decade, was supplanted by the need for qualitative change. This latter actually meant the introduction of updated information services. The 1980's have brought about an expansion in both the conventional dissemination of information and computerized information retrieval systems. This present decade has also given rise to the possibility of creating an international information system and access to the international networks.

In Hungary, the most significant change has been the general recognition that providing information is a fundamental function and thus it has to

be given proper priority. Consequently, it became inevitable that the results of up-to-date planning and organization should be employed and that computerization be introduced. Two factors have complicated a smooth transition: one, the lack and backwardness of domestic computer technology and, two, the fact that libraries are controlled by or subordinated to a variety of administrative agencies and authorities. (Thus, for instance, the various university libraries alone are supervised by four different ministries, while hospital libraries are controlled by the respective city councils.) The heterogeneity of the organizational framework has contributed to the lack of unanimity in development policies, possibilities of innovation and the like. A 1978 decree of the Ministry of Culture and Education somewhat remedied this situation in providing considerable leeway for library co-operation both within the network and in terms of regional collaboration.

In Hungary, it was the natural and applied sciences that were on the cutting edge of change. The first significant efforts towards co-operation were achieved in the field of library automatization. The reasons for this state of affairs were obvious: the large technical and chemical research libraries had always been in close contact with the industrial sector, which has been a source of considerable financial support, with the added advantage that these factories were willing to foot the bills for the expensive computerized information services as well.

As regards the medical library network, which has existed for almost 3 decades, the years of organizational change were the early 1980's. At that time 6 regional centres were established in the country, one in Budapest, 5 in provincial centres, each of the latter located in university towns. Most of these regional centres are at the same time university libraries with coordinating responsibilities involving three associated counties. Their functions pertain to two large areas: (1) they offer professional guidance and coordinate the activities of the health science libraries in the region; (2) they are permanently involved in the expansion of both their relevant library holdings and their respective library and information services. The first function implies on the one hand the coordination of the tasks set by the National Information Centre, the network's supreme authority and, on the other hand, the organization of in-service training programs and other professional courses, the compilation of joint bibliographies, the composition of various descriptive materials, etc.

As regards the expansion of the professional information base, the network's objective has invariably been both to comply with all the professional requests received and to enlarge the range of documentation options. It is now generally agreed that in a number of scientific disciplines, and with special emphasis on medicine, periodical publications have gained a veritably unrivalled position in becoming the major source of current information. Subscription data in Hungary show that institutes of health regularly receive up to 2,500 different foreign journals of medicine and related areas, in 11.5 thousand copies. Within this category, the average number of different periodicals normally subscribed to by a given region amounts to 1,200-1,300. Another survey indicates that about 60 percent of all periodicals reviewed in Index Medicus and 53 percent of the same represented in the MEDLINE data base are available in Hungary. Although this spectrum is relatively narrow when compared to the figure of 4 to 5 thousand normally considered relevant, owing to currency problems even this number is likely to stagnate.

In sum it can be stated that currently about 20 percent of the broad range of available biological-pharmaceutical periodicals is accessible to physicians and other health specialists in Hungary.

To ensure the expansion and maintenance of the current level of relevant document delivery, two options for cooperation have been available. One is offered within the framework of the medical network proper, in which the regional centres pool and coordinate their orders. This is done either by limiting the number of the same periodicals and working out a scheme for sharing or, as in the case of new periodicals, the principle of specialization is given more prominence. Thus new research areas build relatively comprehensive periodical holdings. The second option has been made necessary for the regional centres in the country to transcend the narrow confines of the network and to seek cooperative partners among the other libraries of the region as well. Thus, for instance, our university medical library set up a coordinating board made up of the representatives of the local pharmaceutical company, other research institutes and departments of other universities dealing with fields of research related to ours in the city or the county. In order to expand the document base, we pooled our financial resources, or rechannelled funds to new orders by stopping duplicates. In several regions there have been attempts to bring out joint bibliographies.

Similar cooperative efforts are underway in some other areas of library work.

In the current, seventh, five-year plan of the Hungarian economy, the specific targets of public health have also been determined. These targets include, among other things, research development with special regard to practical utilization, improving the prevention of diseases, diagnostic, therapy and health care. This set of goals also includes the support of the WHO worldwide program called "Health For All by the Year 2000".

Regarding the regional centres, one of the major objectives within the current five-year plan is a comprehensive program of computerization. For the first time in the history of Hungarian libraries, the Hungarian Academy of Arts and Sciences and the National Committee for Technical Development have been commissioned by the Council of Ministers to elaborate a uniform program for the infrastructure of research and technical development. The two main principles of this program are these: (1) providing the major research documentation centres with compatible computer hardware, and (2) developing a national, interactive computer network and, simultaneously, ensuring the possibility of on-line connections with data bases abroad. As a result of the above program, in 1987 the six medical library centres were equipped with identical IBM (PC) AT computers.

The cooperative program was determined by the centres in the following way. In our country it is essential that the level of scientific information should be maintained and that, moreover, through the utilization of the data bases, a process of specialized development should be carried out. In order to satisfy user interest, the first stage of this process is to ensure access to the large data bases abroad. The National Information Centre has conducted on-line search from the MEDLINE since 1982. The other centres have already been hooked up to the system and by the end of this year two of them will have started their computer information services.

The second phase of the program concerns processing. At this stage, centralized processing is going to be combined, based on a predetermined division of labour, with large-scale local accessibility and limited local processing.

Cooperation in this area is achieved in such a way that on the basis of a joint program each network centre generates its data base from its own periodical holdings then, subsequently, the total medical-biological material of the three associated counties will be fed into the machine. Simultaneously,

the national centre will create a national data base of the current periodical stock. The second phase of processing will be aimed at the book stock.

One of the severe drawbacks to on-line information service in Hungary is rooted in the difficulty of acquiring primary documentation. The data offered in my paper indicate the nature of this difficulty, since only 53 percent of the periodical stock processed for MEDLINE is available in the country.

As regards the computerization of other library services, each centre is to proceed according to its own schedule of planning and implementation, but the other centres have to be notified of the rate of progress.

Apart from the technical background, the realization of this program is heavily dependent on the availability of sufficiently qualified personnel and informatics assistance. At the moment it appears even more difficult to meet these demands because not only do we require people skilled in computer search and language proficiency but also there is some doubt about whether the smaller associated libraries are in position to update the level of their intermediary tasks. They have to be aware of user need as well as who to turn to, and where, for satisfying such demands.

The "subjective" or human factor is extremely significant. The "traditional" approach to librarianship has to be radically altered and, at the same time, our librarians have to be made receptive to absorbing novel technology while still being willing to assume a more active role of initiative and guidance.

## COOPERATION OF BIOMEDICAL LIBRARIES OF YUGOSLAVIA

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Biomedical libraries in Yugoslavia are organized and networked within the Yugoslav Biomedical Information system. The system was initiated in 1981 and gradually became operational during the past couple of years.

The system is conceptually based on experience and rules which have been accepted worldwide. In addition some issues relating to factors specific for our country were also considered. I would like to mention some of them.

Constitutionally Yugoslavia is a federation of six republics and two autonomic provinces. Several languages are used in Yugoslav medical information and none of them can be used in international scientific communication. The republics and provinces are responsible for education, research and health care. Since there have been no federal funds available for these purposes the money needed for the system had to be assured through a joint support by the republics and the provinces. Since these funds are rather scarce the system must be implemented predominately by engaging the existing institutions and by coordinating their activities.

Biomedical libraries and information centres have been organized and financed together with other special libraries in that particular republic or province. As a result of this formal connections between them were rather scarce, though there had been an intensive informal communication. This communication, however, was neither organized nor financially supported.

Due to considerable differences in economic development, the development of biomedical libraries and information centres was rather unequal. The lack of a federal institution responsible for the biomedical librarianship and information services is another important feature. Poor technical equipment in libraries and information centres as well as insufficient telecommunication infrastructure represent an important barrier for a modern and effective information service. On the other hand, it can also make a wrong impression that all problems result from it, and that everything would be solved if the equipment were available.

Another feature is the proportion of domestic or national, and foreign or international scientific information. We estimate that our scientific production is less than 1% of the world's scientific information. That means that almost all basic scientific information and literature has to be imported. The problem of its steadily increasing cost is additionally aggravated by the shortage of foreign currency. Due to this, sharing of library holdings

on the national level is necessary and union catalogues are a great priority.

Domestic information is small and in the world scale almost negligible. This information, however, is extremely important for our country for several reasons. Let us mention some of them. This information is a result of our research in which considerable national funds. In addition, the domestic information is usually related to nationally important problems and is essential for their solving. Our literature is mostly written in our languages and it is very important for the lower professional level and the general population. For these reasons papers by our authors must be analysed and a national bibliographic database organized.

On the basis of the characteristics mentioned above a cooperative and decentralized system was established in which all biomedical libraries and information centres are included. In each republic or province the most competent library was appointed as coordinating centre for that unit. Their staff is being gradually completed with professionals in the field of biomedicine and they are more and more engaged in comprehensive information services, including online searching and indexing of domestic scientific documents. The system is headed by the Expert Committee formed of librarians and information specialists from all centres. The Institute for Biomedical Informatics of the Medical Faculty of Ljubljana is the appointed Yugoslav coordinator of the system, which is responsible for intersystem communication, for organizing and maintaining common databases and for other common tasks important for the system.

The Expert Committee started to work in 1983 and since then the system has gradually enlarged and today the programme of the system includes among other implementation, updating and maintenance of three computer databases:

**The Union Catalogue of Foreign Medical Periodicals** contains data on foreign periodicals available since 1984 in about 100 biomedical libraries in all Yugoslavia. The printed version is published once a year. The aim of the catalogue is not only to facilitate interlibrary loans but also to make possible the coordinated purchase of periodicals. For this reason in the first half of each year data on periodicals obtained in the past year as well as data on periodicals ordered for the current year are collected and published. In the printed version only data essential for the users is included.

**The Yugoslav national bibliographic database BIOMEDICINA IUGOSLAVICA** includes data on all types of scientific documents by Yugoslav authors since 1986. In its implementation the MEDLARS rules and MESH thesaurus are used. In a separate field non-MESH terms relevant for our country are added. The database is designed as a national database which should also serve some other purposes; e.g. it may gradually replace present numerous bibliographies of medical schools and institutions. The printed version, entitled **BIOMEDICINA IUGOSLAVICA: Index Medicus Iugoslavicus** is

published periodically four times a year. Though the computer database is rather similar to the Medlars database its printed version is quite different from the Index Medicus. The periodical consists of three parts: The List of Documents includes basic bibliographic data in the form adopted by the US National Library of Medicine and accepted as the standard of biomedical citation. A typical citation consists of the following elements: the Subject Index is arranged by the descriptor alphabet on permuted index principles. The Author Index is arranged by the the alphabetic order of authors. In both indexes the document identification number is used to assure access to the data in the List of Documents.

**Union Catalogue of Foreign Biomedical Books** has just become operational this year. It is available only in machine readable form without a printed version and will be accessible online on a VAX 8800 mainframe computer. A short version of the UNIMARC format is used.

Some other joint activities are also rather important. The databases mentioned above are not considered purely as a commodity for our users in the field of health care and biomedicine but also as a tool for general improvement of our organization and work. In this sense some additional actions were undertaken. We would like to stress the efforts to stimulate interlibrary loan and make it better organized and more rational.

In order to obtain better estimation of the extent of general cooperation between biomedical libraries a study of the interlibrary loans in 1986 has been organized. The results show (1) that the loan of books is rather limited. (2) that the article copies are exchanged primarily between biomedical libraries and that only a small, less than 10% of exchange, relates to other libraries. (3) that despite the high number of libraries in the system a considerable part of them do not participate in interlibrary loans. (4) that about 70% of the requests were sent to only three libraries and that more than half of all requests were sent by only six libraries (5) that an important part of the requests is sent by the end users, a fact which indicates that local libraries are not active enough and that this loan is not rational.

A coordinated purchase of periodicals is essential for our rational work, but it is also a rather difficult task. To start with only basic rules regarding any possible cancellation of a title have been adopted in order to prevent simultaneous cancellation of the same title by two or more libraries. Methods for a comprehensive programme of cooperation is still to be established in the near future.