

User Needs and Library Services

— A study of selected Hospital and Medical College Libraries in Japan —

利用者のニーズと図書館サービス——日本の病院 図書室と医学図書館との比較——

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要 旨

昭和28年に施行された「医療法」第22条では、20床以上の総合病院に図書室の設置を義務付けている。しかしながら、図書室の管理・運営などの基本的な事項（即ち、蔵書構成や蔵書数、図書室の床面積、人員など）や、医療情報サービスについては触れられていない。

日本では、病院図書室に関する研究のほとんどが、病院図書室の管理・運営などの現況報告（fact-finding statistics）である。1981年度の厚生統計要覧によると、1980年末現在、日本には約9,000の病院があるが、病院間の図書館情報活動について十分な資料がない。現状を知るために、病院図書室研究会（病図研）か近畿病院図書室協議会（近病協）に所属する11の病院図書室と関東地方の日本医学図書館協会（JMLA）加盟の10の医科大学を対象に医療従事者の医療情報への関心と、情報活動について郵送調査を行った。調査項目は、1) 医療従事者の図書館利用目的と図書館を利用するの充足度、医療情報源とそれを利用するの満足度、2) 図書館利用者の情報活動に対する司書の理解度、及び3) 病院図書室利権利用者の医療情報活動に対する違いを知ることができるよう工夫した。「図書館利用者」対象のアンケートと医科大学図書と「司書」対象のアンケートの2種類を作成した。図書館利用者は5名ずつを次の3グループから選び、合計15名とした。

グループ 1 —— 内科医、神経内科医、小児科医等を含む内科系医師

グループ 2 —— 外科医、整形外科医、産婦人科医等を含む外科系医師

グループ 3 —— 看護婦、臨床検査技師、理学・作業療法士等を含むパラメディカル系

昭和57年2月23日から3月5日の間に、上記病院図書室及び大学図書館を利用した15名の利用者に「図書館利用者」対象のアンケート用紙を配布し、適宜回収するよう各館の主任司書に依頼した。

病院図書室利用者のアンケート回収率は、59.6%（225名中134名）、医科大学は、77.3%（150名中116名）であった。内訳は、病院図書室内科系の利用者46名、外科系40名、パラメディカル系48名、及び医科大学内科系の利用者47名、外科系44名、パラメディカル系25名であった。司書のアンケート回収率は病院図書室が73%（15館中11館）、医科大学が100%（全10館）であった。病院及び大学では利用者が図書館を利用する目的は、「個人研究」、「診療活動における必要性」、「自己研鑽」、「抄読会」の順であった。現在の図書館資料で図書館の利用目的が「十分果たされている」または、「特定分野については果たされて

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いる」と答えたのは、全利用者248名中、75名（30.2%）であった。図書館の資料で医学生物学情報が「十分果たされている」、または特定分野については得られている」と答えたのは病院図書室利用者32名（24.2%）、医科大学が30名（25.9%）であった。最も多く利用する情報源は、「雑誌論文」であり、情報を必要としている理由は「臨床研究のため」であった。臨床医が最も多く利用する情報媒体について司書の予想は、「外国雑誌」次いで「国内医学雑誌」であった。183名中124名（67.6%）の利用者がクリニカル・メディカル・ライブラリアンシップ（CMLS）の提供を望んでいるのに対して、21名の司書中わずか4名（19%）が、CMLSの提供を希望していた。177名の臨床医中121名（68.4%）と73名のパラメディカル職員中26名（35.6%）がILLサービスを通して文献提供を受けたことがあった。また、177名の臨床医中108名（61%）と、73名のパラメディカル職員中17名（23.3%）がコンピューターによる文献検索サービスを受けたことがあった。利用者が、図書館の利用目的を果たすためには「専門書」次いで「国内雑誌」の収集に力を入れることを望んでいた。資料提供以外のサービスとしては「図書館の開館時間延長」次いで「欧和文タイプライティング」と「翻訳」サービスを望んでいた。

これらのアンケート調査の結果を踏まえて、病院図書室が利用者の要求に十分応えられるような情報活動の将来像を検討した。日本における医学生物学関係図書館のわずかな資料購入費と資源を考える時、館種や規模の大きさに関係なくすべての医学生物学図書館が自由に利用できるように国立の医学生物学情報センター（仮称）の設立が望まれる。同時に、図書館は絶えず変化している図書館利用者のニーズに応えるために利用者動向の観察（user survey）を続ける必要がある。

- I. Introduction
- II. Background
- III. Purpose of study
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I. Introduction

The volume of literature in the health sciences has been increasing. Price says that the total amount of literature doubles every 15 years.¹⁾ Also Durack demonstrates this phenomenon by comparing the number of citations in *Index Medicus* with the weight of *Index Medicus*.²⁾ Various library services have been forced to change with the rapid development of computer science technology in the last decade. Examples of this are the use of computer systems for library work in circulation and cataloging and the availability of computerized literature searching. It is said that libraries in hospitals and medical colleges must be information centers or cores of

information activity in their individual institutions. According to 1980 statistics, there are 9,055 hospitals in Japan of which about 130 are associated with medical colleges.³⁾ The Japanese Medical Service Law, October 22, 1953, provides for the establishment of hospital libraries. The Law only stipulates that "a general hospital which has over 20 beds must provide a library facility", but does not give standards for factors related to library management (e.g., basic requirements for number of holdings, floor space, and manpower) and health science information services. Generally speaking, hospital libraries are weaker and smaller in terms of library budget, manpower, and collection size than other health science libraries in Japan. However it is difficult to

discuss hospital library information activities in Japan because of a lack of informative data.

II. Background

Most previous studies of hospital libraries in Japan have been devoted to fact-finding statistics, such as size of library collection, number of staff, and volume of inter-library-loan service. Some of them have studied both the basic statistics and the users' information needs. Statistical information about the library is valuable in itself for the establishment of base-line measures for hospital libraries.

In 1965, Hata presented a study concerning the budget, manpower, the selection processes of material, the location, and the circulation policy in 15 hospital libraries.⁴⁾ She concluded that the Japanese Medical Services Law was not explicit enough to establish a library in every hospital.

In 1975, Kawahara selected 208 hospitals which had over 100 beds and were in the Osaka and Kyoto areas.^{5), 6)} Her survey asked physicians, allied health personnel, and hospital clerks about their information needs and how they fulfill them. Personal literature files were the most heavily used source, with the hospital library following.

In 1975, the Hospital Library Association in the Kanto Area (HLKA) conducted a survey of 271 hospitals which had over 100 beds.⁷⁾ This survey concentrated on gathering library statistics, such as library budget, collection size, floor space, manpower, and cataloging and classification policy.

Saito wrote an article in 1978 discussing a survey made in 1977 by the Hospital Library Group of the Japan Hospital Association and a survey that she conducted in 1977.⁸⁾ Her survey covered moderately large public hospitals located in Tokyo and in Shizuoka prefecture. Ten physicians from each of these hospitals answered questions about their use of the library. She discussed the lack of an information network between these hospitals.

In 1979, Nikkei Medical McGraw-Hill Inc. surveyed 6,000 medical doctors who subscribed to *Nikkei Medical* and received 841 (15.4%) responses.⁹⁾ The purpose of the survey was to try to improve *Nikkei Medical* as an information channel to its subscribers. It showed that physicians used medical journals heavily as their source of information, and that the information that was most desired was current medical topics.

From 1980 to 1981, the author conducted a survey to ascertain the present situation of the individual hospital libraries in HLKA and AKHL.¹⁰⁾ She discussed both the present status and future prospects of hospital libraries in Japan. Of the 55 HLKA libraries and of the 54 AKHL libraries surveyed, 38 (69%) and 39 (72%) returned the questionnaire, respectively. The data was for fiscal year 1979. The average number of hospital library personnel including non-librarians was a little over one. The total number of current journal titles in the 35 HLKA libraries and 24 AKHL libraries was 8,158 and 3,548, respectively. Comparing them with those in the 96 Japan Medical Library Association (JMLA) libraries (210,193 titles), HLKA holdings were 3.8% of JMLA holdings, and AKHL holdings were only 1.7% of JMLA's. In HLKA libraries, library budgets varied from 2.8 million yen (\$11,200) to 27.5 million yen (\$109,900), and of 32 libraries, in 13 (38%) the budget ranged from 3 to 6 million yen (\$12,000 to \$24,000).^{*} Of 28 HLKA libraries, 21 (75%) provided literature search services, and 14 (50%) libraries used on-line bibliographic systems for this service. Of 25 AKHL libraries, 12 (48%) provided literature search services, but only 7 libraries were using computer search services. Document delivery services were provided in both HLKA and AKHL libraries. This includes the borrowing of material from both domestic institutions and overseas centers. The 33 HLKA libraries borrowed 6,777 items and received requests for 1,998 inter-library-loans. In the 23 AKHL libraries, inter-library-borrow-

* ¥ 250=\$1

ing amounted to 5,031 transactions and inter-library-loans, 1,039. In general the state of hospital libraries may seem to be improving, but it has not changed significantly since the HLKA survey in 1975 or other earlier surveys.

III. Purpose of Study

This study was conducted to assess the information needs of hospital personnel and thereby to improve the information services with the limited resources of hospital libraries in Japan. In order to do so this study concentrates on gathering data about the information activity of health science professionals in Japan. To do this, a survey was designed to look into the present situation as it relates to: 1) the purpose of library use by the health science professionals, his satisfaction with his individual use, and his information sources and satisfaction with those sources, 2) the awareness of librarians to their library users' information activities, and 3) a comparison of hospital library users with medical school library ones.

IV. Methodology

A questionnaire was developed with open-ended questions. The questionnaire was designed to evaluate the users' "need to know" and "the quality of their satisfaction with the present information" in given subject areas. It also allowed them to rank the frequency of their use of a number of channels of information. Other questions were concerned with the respondent's background, his use of libraries, his need for a Clinical Medical Librarianship (CMLS) service, and others.

This questionnaire was mailed in February 1982 to 10 medical college libraries in JMLA in the Tokyo area, and to 15 HLKA and AKHL member libraries in the Tokyo and Osaka areas, which were chosen based on the number of physicians working at the hospital. One hospital library was chosen to represent hospitals with 11 to 20 physicians, one for those with 21 to 30 physicians, and one for

each successive increment of 10. Two types of questionnaires were developed; one was for 15 health science professionals, and the other was for a librarian in each library.^{#1), 2)} The fifteen health science professionals were categorized into 3 groups: Group 1—the medical speciality which includes internists, neurologists, pediatricians, and others, Group 2—the surgical speciality which includes surgeons, orthopedists, gynecologists, and others, Group 3—the allied health sciences which includes nurses, laboratory technicians, occupational/physical therapists, and others. These questionnaires were sent to the above libraries. From February 23rd to March 5th, 1982, 5 library users in the above categories in each hospital library and each medical college library were asked to answer the questionnaire. To libraries, non-library users are an important group within their institution, but in this survey, non-users were excluded, and users in the basic medical sciences were also excluded.

V. Results

The users' response rate was 59.6%, 134 of 225, for hospital library users, and 77.3%, 116 of 150, for medical college library users. Forty-six physicians from the medical speciality, 40 physicians from the surgical speciality, and 48 allied health personnel from hospital library users answered the questionnaire. Forty-seven physicians from the medical speciality, 44 from the surgical speciality, and 25 allied health personnel from the medical college library users responded (Table 1). The age of the respondents varied, ranging from the 20's to the 50's. One-hundred-twenty of them (48%) were in their 30's (#1-I-4).

The librarians response rate was 73%, 11 of 15, for hospital librarians and 100%, 10 of 10 for medical college librarians. In hospitals, the survey was sent to 15 hospitals consisting of 5 national or regional governmental hospitals, 2 Red Cross hospitals, 4 Federation of National Health Insurance Organization hospitals, 1 Juridical Person Hospital, and 2 company affiliated hospitals, and 1 Hospital of Juridical

Table 1 Respondents Characteristics

Category	Physicians				Allied health science personnel	
	Medical speciality		Surgical speciality		Hospital	College
	Hospital	College	Hospital	College		
Mailing number	75	50	75	50	75	50
Number of respondents	46	47	40	44	48	25
Age 20's	9	15	5	6	16	8
30's	24	17	19	25	21	14
40's	12	10	11	11	7	1
50's	1	5	5	2	4	2

Person for Interest—As Authorized under the Civil Law. Of 15 hospitals, 2 health insurance hospitals which have 11 to 20 physicians and 21 to 30 physicians, 1 hospital of Juridical Person for Interest—As Authorized under the Civil Law which has about 110 physicians, and 1 company affiliated hospital which has over 230 physicians did not return the questionnaire. Six of these are teaching hospitals. The survey was sent to 10 medical colleges consists of 1 national medical college, 1 city medical college, and 8 private medical colleges.

From the results of the survey of librarians, 9 hospital libraries and 10 medical college libraries provide library catalogs for both books and periodicals, but 2 hospital libraries have only a catalog for periodicals (#2-II-5). Library user education, such as library orientation and library tours were provided in 8 hospital libraries and 10 medical college libraries (#2-II-6). Library orientation was provided in only one hospital library and in medical college libraries, only 5. Only two hospital libraries provided library tours and no medical college provided this service. Both library orientation and library tours were provided by 4 hospital libraries, in medical college libraries only 3. Library orientation using AV materials followed by a library tour was provided in 2 medical college libraries. One hospital library provided how to search the literature using tools in its library collection such as *Index Medicus* and

Igakuchuoazasshi (Japan Centra Revuo Medicina).

Library hours varied from 8:30 a.m. to 5:30 p.m. in hospital libraries, and from 9:00 a.m. to 9:00 p.m. in medical college libraries.^{10), 11)} Of 11 hospital libraries, 3 answered that "library hour" means when library personnel were available as well as when users could use the library even after the library personnel left the library. The average number of library hours of the other 8 hospital libraries was 8 hours 5 minutes on weekdays and 4 hours 36 minutes on Saturdays. Of the 10 medical college libraries the average number of library hours was 10 hours 6 minutes on weekdays and 7 hours 12 minutes on Saturdays. No library was opened on Sundays or holidays in medical college libraries.

1. Frequency of library use

Of 240 valid responses, the average number of times the library was used was 1 to 2 times in a week and 7 to 8 times in a month (#1-II-1). The average use for 175 physicians was almost twice a week; for the 66 allied health personnel, a little over once a week. Eighty-four hospital physicians used the library almost twice a week; ninety-one physicians in medical colleges, a little over twice a week.

2. Purpose of library use

The question asked the nature of the user's

visit to the library, such as for personal research projects or for routine patient care (#1-II-2). Of 134 valid hospital and 116 valid college respondents, highly ranked purposes for visiting the library were: 1) for personal research project—98 hospital users (33.7%) and 98 college users (30.7%), 2) for routine patient care—79 hospital users (27.1%) and 89 college users (27.9%), 3) for continuing or life-long education—57 hospital users (19.6%) and 69 college users (21.6%).

3. Satisfaction of library user

Of 85 physicians and of the 47 allied health personnel in hospitals 12 (14.1%) and 4 (8.5%), respectively, were completely satisfied with their library use, and among 91 physicians and 25 allied health personnel at medical colleges 14 (15.4%) and only 1 (4%), respectively, were completely satisfied (#1-II-3). While 2 (2.4%) and 1 (1.1%), respectively, were not satisfied in hospitals and colleges.

4. Quality and quantity of library personnel

When 125 hospital library users and 108 medical college library users evaluated the number of their library personnel, 40 (32%) and 52 (48.1%), respectively, answered "enough"; 84 (67.2%) and 53 (49.1%), respectively, "not enough"; 1 (10.8%) and 3 (2.8%), respectively, "cannot evaluate" (#1-II-7). Of 116 hospital library users and of 97 medical college library users, 72 (62.1%) and 65 (67%), respectively, evaluated their library personnel as being "satisfactory"; 40 (34.5%) and 31 (32%), respectively, "unsatisfactory"; 2 (1.7%) and 1 (1.0%), respectively, "cannot evaluate" (#1-II-7).

5. Requests for additional library material

When library users were asked what type of material they would like the library to add to the collection, the most frequent answer was that monograph and textbook purchases be increased, followed by foreign periodicals, including English language journals, then followed by domestic periodicals (#1-II-4). This was the case for both college and hospital

libraries. In college libraries these answers were followed by requests for back issues of foreign and domestic periodicals and then for secondary publications, such as indexes and abstracts. In hospital libraries, they were followed by requests for secondary publications, and then for back issues of periodicals (Table 2).

Table 2 Requests for Additional Library Material
Number of Respondents
Hospital = 134
College = 112

	Hospital	College
Monographs/Textbooks	99	83
General books	12	14
Serials	15	5
Dictionaries	16	13
Secondary publications (Index/Abstracts, etc.)	48	43
Foreign periodicals	75	77
Domestic periodicals	68	60
Audio-visual material	10	6
Back issues of periodicals	42	55
Others	5	1
Total	390	357

6. Clinical medical librarianship service (CMLS)

Clinical Medical Librarianship Service (CMLS) is not widely known in Japan. According to the JMLA survey in 1979, no library of JMLA provides CMLS.¹²⁾ At the time of the previous hospital survey by this author, only one library provided this service.¹⁰⁾ However, of 183 respondents, 124 (67.6%) wanted to have CMLS provided, but of 21 librarians, only 4 (19%) wanted to offer CMLS (#1-II-6) (Table 3). Four librarians doubted the value of the service, but nobody said "no need" for CMLS. However 13 (61.9%) librarians said that their libraries did not have a qualified librarian for CMLS or did not have enough personnel to set up a CMLS program (Table 4).

Table 3 Clinical Medical Librarianship—Library Users

	Physicians		Allied health science personnel		Total
	Hospital	College	Hospital	College	
Number of respondents	66	74	27	16	183
Wanted	39	56	16	13	124
Doubted	1	3	1	0	5
No need	12	7	2	0	21
Others (Not know about the service)	14	8	8	3	33

Table 4 Clinical Medical Librarianship—Librarians

	Hospital	College	Total
Number of respondents	10	11	21
Wanted	2	2	4
Doubted	2	2	4
No need	0	0	0
Others*	6	7	13

* Not qualified librarians/not enough librarian provided.

7. Requests for additional library services other than information services

In hospitals, of 100 responses from 74 physicians, 34 (34%) requested that typewriting services be provided for both foreign languages and Japanese (#1-II-5). This was followed by 32 (32%) requests for the lengthening of library hours, and 15 (15%) requests for translation services. Of 41 responses from 28 hospital allied health personnel, 16 (39%) requested translation services, then followed by the lengthening of library hours, 14 (34.1%); then typewriting services, 9 (22%). Of 121 responses from 83 physicians in medical colleges, 52 (43%) requested longer library hours, then followed by 30 (24%) for typewriting services, then 24 (19%) for translation services. Of 28 responses in allied health personnel in medical colleges (21 persons), 9 (32.1%) requested translation services, then followed by 8 (30.7%) for lengthening of library hours.

8. Quality of library material as sources of biomedical information

Of 85 physicians and of 47 allied health personnel in hospitals, 22 (25.9%) and 10 (21.3%), respectively, were completely satisfied or satisfied in only specific topics (#1-III-1). Physicians in medical colleges were less satisfied than physicians in hospitals (i.e., of 91 physicians, 19 (20.9%) were completely satisfied or satisfied in only specific topics). Two (2.4%), and 1 (1.1%) physicians were dissatisfied in hospitals and colleges, respectively.

9. Experience in using library literature delivery services and using computerized literature search services

In hospitals, of 26 physicians, 54 (62.8%) had used the literature delivery service through ILL at least once, and of 91 medical college physicians, 67 (73.6%) had used this service (#1-III-13). However, of both 48 allied health personnel in hospitals and 25 in colleges used these services to a much lesser degree (15 (31.3%) and 11 (44%), respectively) than physicians in either type of institution. One hundred eight (61%) of 177 physicians and 17 (23.3%) of 73 allied health personnel had at least once received computerized literature search services (#-III-14). Physicians in hospitals had used computerized search services (59 (68.6%)) more than physicians in medical colleges (49 (53.8%)).

10. Experience in using other health science libraries

Of 86 physicians in hospitals, 76 (88.4%)

had used other health science libraries at least once, and of 91 physicians in medical colleges, 66 (72.5%) had used other health science libraries (#1-III-4). Allied health personnel went elsewhere less often than physicians (i.e., of 48 and 25 allied health personnel in hospitals and medical colleges, 31 (64.6%) and 17 (68%), respectively, had gone to other libraries). There was a large variety of reasons why users went to other health science libraries (#1-III-5). Of 109 responses in hospitals (76 physicians), 54 (49.5%) answered that the needed information was provided in other libraries, and 34 (31.2%) were for alumni members of medical colleges. Of 74 in medical colleges (66 physicians), 61 (82.4%) answered that the needed information was provided and only 2 (2.4%) were for alumni members of other medical colleges. In allied health personnel, of 37 (31 persons) in hospitals and 19 (17 persons) in medical colleges, 22 (59.5%) and 12 (63.2%), respectively, answered that the needed information was provided elsewhere, and 7 (18.9%) and 3 (15.8%), respectively, were for alumni members of schools.

11. Pharmaceutical company representatives (detail men) as information sources

Pharmaceutical company representatives provide literature searches and copies of articles for health science professionals (#1-III-8). Hospital physicians received 23.9% of their articles from pharmaceutical company repre-

sentatives and 26.6% of their literature searches from them. College physicians received only 16-17% of either service from such men. The average percentage of copies of articles received by hospital allied health personnel (14.8%) was twice that of allied health personnel in colleges (7.1%)

12. Information sources and the quality of the sources

Respondents were asked to rank the following 13 sources: 1) articles in periodicals, 2) books, 3) colleagues and superiors, 4) seminars, workshops, conferences, and others, 5) personal literature file, 6) catalogs and leaflets about biomedical activities, 7) current awareness services, 8) secondary publications, 9) library reference services—especially computer search services, 10) use of health science libraries other than your own college or hospital library, 11) the information desk at the office of biomedical associations, 12) pharmaceutical company representatives (detail men), and 13) medical newspapers and announcements in journals (#1-III-2). The first choice of each questionnaire was tabulated, and the six most frequent answers are shown in Table 5. Of 244 respondents, 174 (71.3%) used articles in periodicals most frequently. Only 24 (9.8%) were completely satisfied when they used these information sources; 42 (17.2%) were satisfied with specific topics; 147 (60.2%) were relatively and generally satisfied; and 31 (12.7%) were

Table 5 Health Science Professionals' Information Sources

	Hospital	College	Total
Articles in periodicals	87	87	174
Books	9	6	15
Colleagues/superiors	6	2	8
Secondary publications	7	8	15
Library reference services—especially computer search services	6	2	8
Medical newspapers/announcements in journals	5	2	7
Answers in 2 other categories	11	6	17
Total	131	113	244

Table 6 Satisfaction with the information sources

	Physicians			Allied health science personnel			Total
	Hospital	College	Total	Hospital	College	Total	
Number of respondents	84	88	172	47	25	72	244
Completely satisfied	10	13	23	1	0	1	24
Satisfied in only specific topics	15	13	28	11	3	14	42
Relatively satisfied	49	54	103	28	16	44	147
Dissatisfied	10	8	18	7	6	13	31

Table 7 Type of Information Needs

	Hospital		College	
	Physicians	Allied health science personnel	Physicians	Allied health science personnel
Number of respondents	85	44	87	25
Research projects	47	17	64	13
Routine patient care	32	13	20	8
Current trends in medicine	4	2	2	1
Conferences/seminars/meetings	1	3	1	2
Drug information	0	5	0	0
Other answers	1	4	0	1

not satisfied at all (Table 6).

The health science professionals were asked how they intended to use the information: 1) personal research projects, 2) routine patient care, 3) review in the basic medical sciences, 4) current trends in medicine, 5) attendance at seminars, workshops, and conferences, 6) drug information, 7) new medical equipment and its technology, 8) government regulations relating to health care, 9) hospital administration, and 10) government officers affairs (#1-III-9). The most frequently sought after information was personal research projects; this was followed by routine patient care (Table 7). The reasons why they needed information were: of the 283 answers from 186 physicians in hospitals and of the 290 from

90 physicians in medical colleges, 79 (27.9%) and 87 (30%), respectively, answered "clinical research", and 80 (28.6%) and 72 (24.8%) answered "routine patient care" (#1-III-10). This was followed by 39 (13.8%) and 38 (7.6%) for "writing articles and publishing their works." Of the 110 answers from 44 allied health personnel in hospitals, 29 (26.4%) were for "clinical research" and 29 (26.4%) were for "routine patient care" and 22 (20.0%) were for "teaching for students and subordinates". In medical colleges, of the 61 answers in 25 allied health personnel answered, 14 (22.9%) were for "clinical research" and 11 (18.0%) were for "routine patient care", and 11 (18.0%) were for "reviewing current trends"; 11 (18.0%) were for "teaching for students and

subordinates”.

Librarians were asked when physicians get information in the above 10 areas, whether your libraries were their information channel (#2-III-1). Of 11 hospital librarians, 11 (100%) responded that their libraries were assumed to be an information channel to the first two of the 10 areas, and 8 (72.7%) responded that their libraries were an information channel to the first five of them. No hospital librarians responded that their libraries were assumed to be an information channel to new medical equipment and its technology. All of medical college librarians answered that their libraries were assumed to be an information channel to the first four of the 10 areas. This was followed by Government regulations relating to health care, 9 (90%) and attendance at seminars, workshops, and conferences, 8 (80%). Two librarians (20%) answered that their libraries were assumed to be an information channel to drug information and new medical equipment and its technology.

Librarians were asked to what degree does your library provide sources to satisfy the users' needs in these 10 areas (#2-III-3). Librarians in medical colleges answered that they provided information in the following 4 categories partially or completely: 1) research project, 2) routine patient care, 3) review in the basic medical science, and 4) current trends in medicine. But hospital librarians responded that they could only satisfy the two of the above four (Table 8).

The health professionals were asked to rank the frequency of their use of the following sources: 1) foreign periodicals including English language journals, 2) domestic periodicals issued by commercial publishers, 3) official journals from domestic medical associations, 4) national conferences, meetings, seminars, 5) foreign language monographs and textbooks including English language ones, 6) domestic monographs and textbooks, 7) review articles, 8) international conferences, meetings, seminars, and others, 9) colleagues and superiors, 10) domestic

Table 8 Adequacy of Information Provided by the Library

a=Completely provided
b=Relatively provided
c=Not provided

	Hospital				College			
	a	b	c	Total	a	b	c	Total
Personal research project	1	10	0	11	7	3	0	10
Routine patient care	2	9	0	11	6	4	0	10
Review of basic medicine	1	7	3	11	5	5	0	10
Current trends in medicine	1	8	2	11	7	3	0	10
Seminars/workshops/conferences	3	5	3	11	2	7	1	10
Drug information	1	0	10	11	0	4	6	10
New medical equipments	0	1	10	11	0	3	7	10
Government regulation Relating to health care	0	5	6	11	0	5	5	10
Hospital administration	0	7	4	11	0	3	7	10
Government officers affairs	0	3	8	11	1	2	7	10
Total	9	55	46	110	28	39	33	100

Table 9 Frequently Used Information Sources—Library Users

Number of Respondents
Hospital=549
College =537

	Physicians			Allied health science personnel		
	Hospital	College	Total	Hospital	College	Total
Foreign periodicals including English language journals	81	81	162	20	14	34
Domestic periodicals	74	71	145	34	22	56
Official journals from domestic medical association	49	53	102	22	17	39
National conferences/meetings/seminars	34	29	63	21	14	35
Foreign monographs/textbooks including English language ones	36	44	80	10	9	19
Domestic monographs/textbooks	27	38	65	18	14	32
Computer search services	34	25	59	4	1	5
Answers in 7 other categories	79	82	161	36	23	59
Total	414	423	837	165	114	279

medical newspapers, 11) personal literature file, 12) pharmaceutical company's pamphlets and leaflets which promote products, 13) library services—especially reference services, and 14) on-line computer search services (#1-III-11). The results are shown in Table 9. The Table shows the seven most frequent first choices. Of 837 responses in the physicians group, 162 (19.4%) were foreign periodicals including English language journals, then followed by domestic periodicals issued by commercial publishers, and then official journals from domestic medical association. Of 279 responses from the allied health personnel, 56 (20.1%) were domestic periodicals issued by commercial publishers, 39 (14%) were official journals from domestic medical associations, and 35 (12.5%) were national conferences, seminars, and meetings. Librarians responded that heavily used information sources by physicians

were foreign periodicals including English language journals, and domestic periodicals issued by commercial publishers (#2-III-2) (Table 10).

Table 10 Librarians' Assumption—Heavily Used Information Sources by Users—

	Hospital	College	Total
Foreign periodicals	8	5	13
Japanese periodicals	1	1	2
Official journals from domestic medical association	1	0	1
Other answers	0	2	2
Total	10	8	18

Cross-tabulations relating the purpose of needed information (—routine patient care, personal research projects, and teaching programs for students and subordinates) to the type of information source are summarized in Table 11 (#1-III-12). For the purpose of the needed information, many respondents chose 5 to 6 out of the 14 information sources which were mentioned in the above question. For personal research projects, of the 764 responses from 170 physicians, 80 (10.5%) had used a computerized literature search, and 81 (10.6%) had used national conferences, meetings, seminars. When physicians in both hospitals and colleges were engaged in routine patient care or teaching programs for students and subordinates, they used these two sources of information to a lesser degree. On the other hand, domestic periodicals issued by commercial publishers were used heavily in routine patient care, and domestic monographs and textbooks were used heavily in teaching programs for students and subordinates.

VI. Discussion and Consideration

In this survey, the average number of times in a week physicians use the library is almost the same as Saito's survey.⁸⁾ Physicians' information sources are also the same as the results of Saito and Nikkei Medical McGraw-Hill Inc.⁹⁾ However, the purpose of library use is different from Saito's data; in this case, "personal research project" ranks first as purpose of library use, but in her case, "routine clinical patient care" was first.

The author expected the following results before the survey was conducted: 1) the purpose of library use for physicians in hospital libraries would be for routine patient care, but the purpose for physicians in medical college libraries would be for personal research, and 2) physicians in hospital libraries would be less satisfied with their own library services or material than physicians in medical college libraries, and would need to seek information elsewhere. However, the survey identified that there was not much difference between physicians in hospitals and medical college

libraries in terms of purpose of library use, satisfaction with using the library, information sources, and information habits. It is said that the quality of satisfaction is very personal, subjective, and changeable, but because of this, it is very important for library users to know the library in order to use the library effectively. At the same time, it is important for the librarians to know the users' needs in order to change the library services accordingly. In this survey, users were asked several questions about the degree of their satisfaction of their information activities: i.e., 1) satisfaction of library use, 2) quality of library material as sources of biomedical information, and 3) quality of used information sources. As the questions were from general to specific, degrees of satisfaction were: to the first question; of 132 valid hospital users and of 116 valid medical college users, 41 (31.1%) and 34 (29.3%), respectively, were completely satisfied or satisfied in only specific topics; to the second, 32 (24.2%) and 30 (25.9%). To the third question, of 131 hospital users and of 113 medical college users, 37 (28.2%) and 29 (25.7%), respectively, were completely satisfied or satisfied in only specific topics. Two point four percent of the users in 11 hospitals were dissatisfied with their use of the library, but in Saito's study, 11% in 7 hospitals were.⁸⁾ Although the 11 hospital libraries in this survey are moderately large and well organized, including 6 teaching hospitals, it seems that hospital library services in general have improved. However, the degree of satisfaction for 3 of the questions in this study was not high.

In this survey, several aspects were found that need improvement to fulfill users' needs:

1. To offer longer library hours

From this survey, in general, library hours in hospital libraries are shorter than in medical colleges. Over 36% of 290 responses (206 persons) in hospital and medical college users requested longer hours of library service. Of 146 responses (106 persons) from hospital users and of 93 responses (87 persons) from medical college users, 9 (6.2%) and 7 (7.5%), respectively, answered that limited library hours was one

Table 11 Cross Tabulation: Frequently Used Sources vs. Purpose of Information Use

Selected sources	Engagement in hospital-based patient care		Engagement in research project		Engagement in teaching program		Total
	Hospital	College	Hospital	College	Hospital	College	
Foreign periodicals including English language journals	41	29	45	73	7	13	208
Domestic periodicals	70	67	19	35	6	16	213
Official journals from domestic medical associations	34	30	40	51	2	8	165
National conferences/meetings/seminars	29	13	30	51	5	4	132
Foreign monographs/textbooks including English language ones	38	45	20	30	9	14	156
Domestic monographs/text-books	46	46	12	17	10	23	154
On-line computer search services	10	9	35	45	1	0	100
Answers in 7 other categories	116	118	109	152	7	22	524
Total	384	357	310	454	47	100	1,652

of the reasons why they need to use other health science libraries.

2. To provide translation services and typewriting services

Translation and typewriting services were frequently requested as being needed additional library services. In the survey from Saito, these services were not as important.⁸⁾ Typewriting is not familiar to library users in Japan, and the operation of the typewriter for the Japanese language is not easy.

Frequently used information sources were foreign periodicals (Table 7 and 11). When library users get information written in the user's second or the third language, if the library were to provide translation services, the users could utilize this information more effectively.

3. To provide CMLS

Of 93 health science professionals in hospitals,

55 (59.1%) wanted to have CMLS, and of 90 in medical colleges, 69 (75.8%) wanted it. Extended library services, such as CMLS and Literature Attached to Charts (LATCH) services would help with routine patient care as they involve the service of literature selection in response to specific requests.^{13), 14)} Larger and relatively well-organized medical libraries should begin CMLS or LATCH services as soon as possible. Because extended library services help to draw attention to the library, the library, can become a more important information channel to support routine patient care.

4. To emphasize library reference services

This study showed that computerized literature services and library reference services were not useful information sources for physicians in clinical patient care. Since, in Japan, MEDLINE on-line service has been available

since 1976, and DIALOG on-line service has been available since 1980, libraries should emphasize computerized literature search services for library reference, so that the degree of users' satisfaction will improve. Also the library should emphasize ILL services through reference services, so that the degree of use of other libraries will be decreased. The main reason for going to other health science libraries in both hospital and medical college users was "needed information" (of 146 responses (106 persons) hospitals and 93 (87 persons) in medical colleges, respectively, 76 (52.1%) and 73 (78.5%) answered so).

5. To hire more library personnel, furthermore to hire more qualified library personnel

The figures of library statistics in this study indicated, in hospital libraries with over 500 monographs and over 300 current journal titles were staffed by about 1.6 personnel in one year, but in medical college libraries with about 2,900 monographs and about 1,700 current journal titles were staffed by about 13.7 personnel. This lack of staff was pointed out by library users. About 67.2% of hospital library users (84 responses) responded that their libraries did not have enough personnel. Medical college library users were less dissatisfied than hospital ones, but they still asked for an increase in staff (48.1%, 52 responses).

On the other hand, when librarians were asked if their libraries were an information channel for physicians' information needs and

asked about the quality of the information sources in their libraries, the librarians' confidence was not high. Some of librarians noted that although their libraries had the needed information, they were not able to give enough service for the utilization of the sources.

6. To have an increase in monographs, textbooks, and periodicals in the library collection

At this time, individual research projects in health science fields are becoming more specialized. In order to fulfill the library users' needs, even the 10 medical college libraries which have larger collections than the 11 hospital libraries, cannot provide all of the information that would be needed for the various specific requests by their physicians from their own collections (Table 12). According to figures from one of the 10 medical colleges, the average price per title in 1980 of foreign medical books (e.g., monographs and textbooks) is 11,304 yen (\$45.2), and for domestic ones, is 11,128 yen (\$44.5). The average price per title of foreign periodicals is 46,431 yen (\$185.7) and for domestic ones, excluding medical association journals, is 19,335 yen (\$77.3).¹⁵⁾ Due to limited budgets, hospital libraries cannot purchase all of the books and periodicals needed to fulfill all of their library users' requests. Even in larger medical college libraries, they cannot cope with all of their users' demands. It is a fact that health science professionals in both hospitals and medical

Table 12 The Average Library Budget, Holdings, Literature Delivery Services, and Personnel in 1980
¥250=\$1

	Budget for purchasing materials (Million Yen)	Total Number of holdings	Number of Monographs acquired in one year	Current journal titles		Literature delivery services		Number of personnel
				Foreign Languages	Japanese language	Borrowing	Loaning	
Hospital N=11	10.8 (\$43,200)	16,904	514	167	147	265	92	1.59
Medical college N=10	56.4 (\$225,600)	93,719	2,891	936	820	2,098	15,656	13.7

colleges are heavily requesting that more monographs and textbooks, and periodicals with their back issues be included in library collections (Table 2).

There is a well organized ILL network in Japan; i.e., JMLA has developed an inter-library-loan network which has been operational since 1927. However, in 1979, JMLA membership was limited only to institutional members, which consists of 68 medical college libraries, 14 dental college libraries, 10 profit or non-profit organization libraries, and 4 hospital libraries.¹⁶⁾ Some medical college libraries which do not meet JMLA standards are not members of the organization, but they will be eligible to join the organization as soon as their libraries meet the requirements. Table 12 and this author's previous study identified that most hospital libraries seem not to meet the standards of JMLA membership in basic requirement of library figures; i.e., the holdings of the library, expenditure for purchasing, number of personnel, and others.¹⁰⁾ In order to improve this present situation of library services with limited resources in health science libraries in Japan, one of the best solutions is the establishment of a centralized government-sponsored national network system based on the concept of a "Consortium," such as the regional medical library network of the National Library of Medicine in the USA.¹⁷⁾⁻²⁰⁾ The government-sponsored National Center for Health Science Information would be at the core of the entire network, and would be an integrated system to help all health science libraries to access the literature in the health sciences, which is increasing exponentially. This provides for not only access tools to these information and literature delivery systems but also for the assignment of collections in each subdivided regional groups in the network system. One example of this is a quality control for computerized literature services. According to the 1981 statistics, most medical college libraries provided either manual or computerized literature search services.¹¹⁾ Since these services are provided individually in each library, there

is a lack of cooperation. At this time, JMLA does not have any official cooperation with information centers, such as the Japan Information Center of Science and Technology (JICST) which is a MEDLARS Center in Japan, the International Medical Information Center, Inc. (IMIC), and the Japan Pharmaceutical Information Center (JAPIC). There is no service network for the activities between JMLA and these centers. If the government-sponsored National Center for Health Information created a service network for literature searches, then small hospital libraries would be able to offer these services to their users. Libraries that already provide such services would be able to help those that cannot yet offer them. Such services could be made available in a more timely and cost-effective manner. This network also could promote standards for searching. The National Center could sponsor workshops to both librarians and library users. This would then enforce a type of quality control for searching. Until the government-sponsored National Center for Health Science Information could be established, JMLA should select or amalgamate existing hospital organizations or networks, (such as HLKA and AKHL, and the Federation of National Public Service Personnel Natural Aid Associations Library Network System), and should place them under its auspices.

It should be noted that almost all pharmaceutical company representatives (detail men) offer free literature searches or photocopies to health science professionals in Japan. The survey indicated that physicians have been relying heavily on these representatives. Since there is not enough data to analyze the effects of pharmaceutical companies as an information channel in this survey, it is considered that another study may be needed in the near future.

There are a number of other factors that were not addressed in this study. This survey was conducted by mail, and certain types of questions needed to be asked in an interview. Some of these questions for library users could be: 1) when you use other health science

libraries, do you go there by yourself or do you ask someone to go there?, 2) how do you get permission to use other health science libraries?, 3) what is your satisfaction of library use when you use other health science libraries?, 4) how many titles did you purchase individually in the last one year?, and 5) what titles do you use frequently in your work?

VII. Comment

The survey identified the information activity of the health science professionals in 11 hospitals and 10 medical colleges in Japan comparing hospital library users with medical college users, such as the purpose of library use, his satisfaction with his individual use, and information sources with those sources, and identified the awareness of librarians to their library users' information activities. Using this data, the author discussed ways to improve library information services. In order to develop innovative library services, library user surveys should be conducted. The final goal of the health science library would be to provide prompt, effective, and relevant information services at a reasonable cost to any health science professional in Japan. This would include 1) original article delivery services, 2) citation services, and 3) clearing-house services. Since library users' needs are perpetually changing, it is very hard to evaluate how the library can improve its services to fulfill their users' requests. So that the library may change in the direction of its users' needs, the library should continue to observe it regularly.

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- 1) Price, Derek J. de Solla. "Little Science, Big Science". New York, Columbia University Press, 1963. 118 p.
- 2) Durack, D. T. "The weight of medical knowledge". New England Journal of Medicine, Vol. 298, p. 773-775 (1978).
- 3) Koseidaijinkanbotokeijohobu (The Ministry of Health and Welfare, Statistics and Information in Japan) ed. "Koseitokeyoran—Showa 56 nenban (Statistical Handbook of Public Health and Social Welfare—A Complete Collection of Major Statistics Related to Public Health and Service)". Tokyo, Koseitokeyokai (Statistics Related to Public Health and Social Welfare Association), 1982. 130 p. (Japanese)
- 4) Hata, Masako. "Byointoshoshitsuno genkyo (Status of hospital libraries)". Igaku Toshokan (Medical Library). Vol. 12, p. 111-114 (1965). (Japanese)
- 5) Kawahara, Keiko. "Association of Kinki Hospital Libraries—its state and problems". Igaku Toshokan (Medical Library). Vol. 22, p. 149-157 (1975). (Japanese)
- 6) Kawahara, Keiko. "Ankeito-shukeihokoku (Report of Hospital Library Survey)". Kinki-byointoshoshitsukyogikaikaiho (The Association of Kinki Hospital Libraries). Vol. 1, p. 2-5 (1974). (Japanese)
- 7) Byointoshoshitsukenkyukai (The Hospital Library Association in the Kanto Area). "The state of the hospital libraries in the Kanto Area". Igaku Toshokan (Medical Library). Vol. 22, p. 159-166 (1975). (Japanese)
- 8) Saito, Junko. "The Network of hospital library service". Library and Information Science. No. 16, p. 163-184 (1978). (Japanese)
- 9) Nikkei Medical McGraw-Hill Inc. "Chosa: Igakujoenokanshinwa toshitomoni kiso→rinsho→isei etoutsuru (Survey: physicians' information needs broken down by age: from basic medicine to clinical medicine to medical politics)". Vol. 8, p. 107-112 (1979). (Japanese)
- 10) Kobayashi, Michiko. "Survey of hospital libraries in the Kanto and the Kinki Regions of Japan; future prospects of Japanese hospital libraries. Igaku Toshokan (Medical Library). Vol. 29, p. 46-55 (1982). (Japanese)

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- 11) Japan Medical Library Association. "The 52nd Annual Statistics, The Japan Medical Library Association, April 1980—March 1981". Tokyo, Japan Medical Library Association, 1981. 231 p. (Japanese)
- 12) Japan Medical Library Association, "The 50th Annual Meeting, Collations". Tokyo, Japan Medical Library Association, 1979, p. 32-42. (Japanese)
- 13) Hutchinson, Susan; Stears, Norma. "Pre-selecting literature for routine delivery to physicians in a community hospital-based patient care related reading program". Bulletin of the Medical Library Association. Vol. 69, p. 236-237 (1981).
- 14) Farmer, Jan; Guillaumin, Beth. "Information needs of clinicians; observations from a CML program". Bulletin of the Medical Library Association. Vol. 67, p. 53-54 (1979).
- 15) Library, Toho University, School of Medicine. "Annual Report of the Medical Library, Toho University 1981". Tokyo, Toho University, 1981. p. 9-11. (Japanese)
- 16) Japan Medical Library Association. "The 51st Annual Statistics, The Japan Medical Library Association (April 1979—March 1980)". Tokyo, Japan Medical Library Association, 1979. p. 8-13. (Japanese)
- 17) Bishop, David. "Activities for a regional medical library". Bulletin of the Medical Library Association. Vol. 63, p. 247-251 (1975).
- 18) Tsuda, Yoshinari. "Medical information service". Library and Information Science. No. 13, p. 109-123 (1975). (Japanese)
- 19) Kobayashi, Michiko. "Effectiveness of Japanese Hospital Libraries". Speech at the Eighty-First Annual Meeting, the U.S. Medical Library Association. Montreal, 1981-06.
- 20) Kobayashi, Michiko. "Survey of Hospital Libraries in the Easetern Region of Japan". Based on a paper presented at the Eighty-First Annual Meeting of the U.S. Medical Library Association. Montreal, 1981-06.

#1 Appendix A

Questionnaire—I

To: Medical Library User

Kindly fill in the information requested, and return the form to the circulation desk in your library as soon as possible.

I. General Information

1. Name of Medical College/Hospital _____
2. Type of your work. (Please circle.)
 - 1) Clerical personnel
 - 2) Allied health science personnel
 - 3) Medical speciality personnel
 - 4) Surgical speciality personnel
3. Cumulated year of your occupation _____
4. Age (please circle.)
 - 1) 20's
 - 2) 30's
 - 3) 40's
 - 4) 50's
 - 5) 60's

II. About the Library in your Institute

1. How often do you use the library ?
_____ per week _____ per month
2. What purpose do you have to visit the library ? (Please circle.)
 - 1) for personal research project
 - 2) for routine patient care
 - 3) for continuing or life long education
 - 4) for teaching programs for students and subordinates
 - 5) for routine patient care
 - 6) others (Please describe.)
3. Are you satisfied with your library use ? (Please circle.)
 - 1) Completely satisfied
 - 2) Satisfied in only specific topics
 - 3) Relatively satisfied
 - 4) Not satisfied
4. In order to satisfy your needs, what library material is needed to be added to the library collection ? (You may circle multiple categories.)
 - 1) monographs/textbooks
 - 2) general books
 - 3) serials
 - 4) dictionaries
 - 5) the secondary publications (Indexes/Abstracts, etc.)
 - 6) foreign periodicals
 - 7) domestic periodicals
 - 8) audio-visual material
 - 9) back issue of periodicals
 - 10) others (Please describe.)
5. What type of additional service do you want the library to provide ? (Not including services related to library information services.)
 - 1) translation

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- 2) typewriting (both Japanese and foreign languages)
- 3) personal literature file
- 4) extended library hours
6. What do you think of Clinical Medical Librarianship Service (CMLS)? (Please circle.)
 - 1) want to CMLS 2) doubt CMLS
 - 3) no need CMLS 4) others (Please describe)
7. What do you think of the quantity and quality of your library personnel? (Please circle.)
 - 1) Quantity of library personnel
 - a) enough b) not-enough c) cannot evaluate
 - 2) Quality of library personnel
 - a) satisfactory b) unsatisfactory c) cannot evaluate

III. About Biomedical Information

1. What do you think of the quality of library material as sources of biomedical information? (Please circle.)
 - 1) completely satisfied 2) satisfied in only specific topics
 - 3) relatively satisfied 4) not satisfied
2. Where did you get information from the following 13 sources? (Please rank the first three.)
 - 1) articles in periodicals _____
 - 2) books _____
 - 3) colleagues and superiors _____
 - 4) seminars, workshops, conferences, and others _____
 - 5) personal literature file _____
 - 6) catalogs and leaflets about biomedical activities _____
 - 7) current awareness services _____
 - 8) secondary publications (Index and Abstracts) _____
 - 9) library reference services (especially computer search services) _____
 - 10) use of health science libraries other than your own college/hospital library _____
 - 11) the information desk at the office of biomedical associations _____
 - 12) Pharmaceutical company representatives (detail men) _____
 - 13) medical newspapers and announcements in journals _____
3. What do you think of the quality of your information sources? (Please circle.)
 - 1) completely satisfied 2) satisfied in only specific topics
 - 3) relatively satisfied 4) not satisfied
4. Do you have experience in using other health science libraries out of your institute? (Please circle.)
 - 1) Yes 2) No
5. Why did you use other health science libraries? (Please circle.)
 - 1) alumni of the school/college 2) location is a short distance
 - 3) library hours is available 4) needed information is provided
 - 5) qualified librarians are provided 6) others (Please describe)
6. When you go to these libraries out of your institute, do you go there by yourself? (Please circle.)
 - 1) Yes 2) No

How do you get library entrance permission for other libraries? (Please circle.)

 - 1) a letter of introduction from your library 2) alumni members' card
 - 3) a letter of introduction from someone 4) others (Please describe)
7. Satisfaction of library use when you use other health science libraries. Please rank using

a, b, and c. (a=completely satisfied; b=relatively satisfied; and c=not satisfied)

- () using library material () copy services
() literature search services () circulation
() ILL () others (Please describe)

8. What percentage of your literature searches and copies of articles come from pharmaceutical company representatives (detail men)?

- 1) literature searches about _____ %
2) copies of articles about _____ %

9. How do you intend to use the information? (Please rank the first four.)

- _____ 1) personal research project
_____ 2) routine patient care
_____ 3) review in the basic medical sciences
_____ 4) current trends in medicine
_____ 5) attendance at seminars, workshops, and conferences
_____ 6) drug information
_____ 7) new medical equipment and its technology
_____ 8) Government regulations relating to health care
_____ 9) hospital administration
_____ 10) Government officers affairs

10. Why do you need the information? (Please circle the first four.)

- 1) for clinical research
2) for routine patient care
3) for gathering current trends
4) for teaching for students and subordinates
5) for lectures and speeches
6) for writing articles and publishing works
7) for hospital and dispensary administration
8) others (Please describe)

11. Which of the following sources do you frequently use? (Please rank the first three.)

- _____ 1) foreign periodicals including English language ones
_____ 2) domestic periodicals issued by commercial publishers
_____ 3) official journals from domestic medical associations
_____ 4) national conferences, meetings, and seminars
_____ 5) foreign language monographs and textbooks including English language ones
_____ 6) domestic monographs and textbooks
_____ 7) review articles
_____ 8) international conferences, meetings, seminars, and others
_____ 9) colleagues and superiors
_____ 10) domestic medical newspapers
_____ 11) personal literature file
_____ 12) pharmaceutical company's pamphlets and leaflets which promote products
_____ 13) library services (especially reference services)
_____ 14) on-line computer search services

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12. Please check the relationship between the purpose of the needed information and the following sources.

	Routine patient care	Personal research projects	Teaching programs for students and subordinates
1) foreign periodicals including English language ones			
2) domestic periodicals issued by commercial publishers			
3) official journals from domestic medical associations			
4) national conferences, meetings, seminars			
5) foreign language monographs and textbooks including English language one			
6) domestic monographs and textbooks			
7) review articles			
8) international conferences, meetings, seminars, and others			
9) colleagues and superiors			
10) domestic medical newspapers			
11) personal literature file			
12) pharmaceutical companys' pamphlets and leaflets which promote products			
13) library services (especially reference services)			
14) on-line computer search services			

13. Have you used the library literature delivery services through ILL?

1) Yes 2) No

14. Have you received computerized literature search services, such as JOIS (MEDLINE) and DIALOG services?

1) Yes 2) No

15. How many titles did you purchase personally in the last one year?

	Monographs/textbooks titles	Journal titles
Foreign languages (including English language)		
Japanese language		

16. What titles do you use frequently in your work? (Please write the first three in both monographs/textbooks and journal titles)

1) Monographs/textbooks titles 2) Journal titles

- | | |
|----------|----------|
| a. _____ | a. _____ |
| b. _____ | b. _____ |
| c. _____ | c. _____ |

Thank you very much for answering this Questionnaire.

Michiko Kobayashi, Librarian
The Library, Ohashi Hospital,
Toho University
2-17-6 Ohashi, Meguro-ku, Tokyo
153 Japan

2 Appendix B

Questionnaire—II

To: Medical Librarian

Kindly fill in the information requested and return this questionnaire and the library users' questionnaires to me as soon as possible. Please use data at the end of fiscal 1980; (i.e., March 31, 1981).

I. General Information

1. Name of medical college/hospital _____
2. Cumulated years of your occupation _____
3. Age (Please circle.)
 1) 20's 2) 30's 3) 40's 4) 50's 5) 60's

II. About your Library

Please circle or write the appropriate number in each column.

1. Staff
 - 1) Librarian a) Yes b) No
 - 2) Non-librarian a) Yes b) No
 - 3) Total number of staff _____
2. Budget for purchasing material _____ yen
3. Cumulated number of holding (Monographs and bound periodicals)
 - 1) Foreign languages including English language _____
 - 2) Japanese language _____
 - Total _____

4. Statistical numbers for the fiscal 1980

- | | Items | Number of
personnel |
|---|-------|------------------------|
| 1) Number of book acquisitions | _____ | _____ |
| 2) Number of periodicals bound | _____ | _____ |
| 3) Number of current periodical titles: | | |
| Foreign languages including English one | _____ | |
| Japanese language | _____ | _____ |
| 4) Number of library users in the year | _____ | |
| 5) Number of library material circulated in the year | _____ | _____ |
| 6) Number of reference transaction in the year | _____ | |
| 7) ILL Borrowing | _____ | |
| Loaning | _____ | _____ |
| 8) Number of photo-copy requested or
number of photo-copies produced | _____ | |
5. Does your library provide Library Catalogs?
 - 1) Books a. Yes b. No
 - 2) Periodicals a. Yes b. No
 6. Does your library offer users' education programs?
 - 1) Yes 2) No

If your circle 1), please choose one of following:

- 1) provides Library orientation only
 - 2) provides Library tours only
 - 3) provides both 1) and 2)
 - 4) provides Library orientation using tape, slides and other AV material, then offers library tour
7. What do you think of Clinical Medical Librarianship Service (CMLS)?
Please circle the following:
- 1) want to provide CMLS in your library
 - 2) do not to have CMLS in your library
 - 3) no need to have CMLS in your library
 - 4) others (Please describe.)

III. About Biomedical Information

1. When physicians need to get information, do they go through your library?
(Please circle in each column.)

	Yes	No
1) personal research project		
2) routine patient care		
3) review in the basic medical sciences		
4) current trends in medicine		
5) attendance at seminars, workshops, and conferences		
6) drug information		
7) new medical equipment and its technology		
8) government regulations relating to health care		
9) hospital administration		
10) government officers affairs		

2. Which sources do you think are frequently used by physicians? (Please rank.)
- _____ 1) foreign periodicals including English language ones
 - _____ 2) domestic periodicals issued by commercial publishers
 - _____ 3) official journals from domestic medical associations
 - _____ 4) national conferences, meetings, seminars
 - _____ 5) foreign language monographs and textbooks including English language ones
 - _____ 6) domestic monographs and textbooks
 - _____ 7) review articles
 - _____ 8) international conferences, meetings seminars, and others
 - _____ 9) colleagues and superiors
 - _____ 10) domestic medical newspapers
 - _____ 11) personal literature file
 - _____ 12) pharmaceutical company's pamphlets and leaflets which promote products
 - _____ 13) library services (especially reference services)
 - _____ 14) on-line computer search services

User Needs and Library Services

3. To what degree does your library provide for physicians' information needs adequately? Please fill in each column using a, b, and c. (a=completely provided; b=relatively provided; and c=not provided).

1) personal research project	a	b	c
2) routine patient care			
3) review in the basic medical sciences			
4) current trends in medicine			
5) attendance at seminars, workshops, and conferences			
6) drug information			
7) new medical equipment and its technology			
8) government regulations relating to health care			
9) hospital administration			
10) government officers affairs			

Thank you very much for answering this Questionnaire.

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