

Central medical library in Saudi Arabia : establishment and prospective development

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Abstract

A case study about the steps taken for the establishment of the Central Medical Library at the Ministry of Health in Kingdom of Saudi Arabia, it include historical background, location of the library, staff, collections, automation system, and gives some recommendations about the project.

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The study is conducted to trace the steps taken for the establishment of the Central Medical Library at the Ministry of Health and to underline the endeavours made by the General Committee for Medical and Health Information in securing W.H.O. cooperation in developing collections, seeking EMRO (Eastern Mediterranean Regional Office) coordination for manpower training and the acquisition of health information resources.

Setting: The Central Medical Library of the Ministry of Health is situated in building no.4 of the General Directorate for Health Institutes and Colleges, District

Sulaimania, Riyadh. The C.M.L. comprises book collection of 2687 titles and 138 journal subscriptions as well as CD-Rom collections.

Methodology: The case study, historical, and descriptive methods have been deployed to gather both statistical and factual information. In addition, direct observations also helped in accessing the effectiveness and usefulness of collections and services.

Results: Results of the study have revealed the need to strengthen not only the print collections but also digital and electronic resources. The library users are more inclined to make use of internet for obtaining health information and they spend increased amount of time on their computer either at home or in the C.M.L. Moreover, the present library staffs rightly feels the necessity of receiving training for their continuing professional development in order to equip themselves to adequately cater for the health information needs of library users.

Conclusions

The interlibrary cooperation should be promoted and the resource sharing with other medical libraries must be given priority. The readers are less interested in using print collections and they prefer access to internet and on-line medical journals. Apart from historical background concerning health services in Saudi Arabia, The state of C.M.L. collections are described, the gaps that exist are mentioned. The recommendations for the future growth of collections and the provision for staff training are recorded. The nature of cooperation with WHO. and coordination with E.M.R.O are discussed. The urgency of involving other medical libraries in cooperative ventures is proposed.

Historical background

The provision of effective health services in the Kingdom of Saudi Arabia has always been the top priority of the Saudi Government. Evidently, the first step taken by King Abdul Aziz upon entering Hejaz on 11 February 1925, was the establishment of

Public Health Directorate (PHD).It was entrusted with the task of reviewing, analysing and supervising the existing hospitals and dispensaries in the main towns of Hejaz located in the Western Region of Saudi Arabia. The Directorate undertook a broad survey of the health services offered to the general public. It

was discovered that health centres including hospitals, clinics and dispensaries did not possess

appropriate machinery, equipment and infrastructure needed for the treatment of patients. There was an acute shortage of qualified medical doctors and nurses.(1) Until 1941, the financial resources were meagre and the number of hospitals was insufficient. However, the Government began to take keen interest in the health sector by allocating generous financial resources to the Public Health Directorate. From 1945 to 1951 the PHD made notable improvements in the health sector in terms of hospital buildings and medical personnel. In 1951, PHD was transformed into the Ministry of Health (M.O.H) with fully integrated activities and capabilities. Simultaneously, the Kingdom witnessed the appointment of Prince Abdullah Al-Faisal as the first Minister of Health.(2) Who had the honour of approving the health budget for the year 1951, amounting to Saudi Riyals 6,519,760 million. In 1997 allocations for the Ministry of Health was increased to SR 10747 millions representing 5.9% of the total state budget and in 2001 the budget allocation reached 7.1%.

The M.O.H. launched an ambitious programme for maintaining and visibly improving the health standards of every citizen in the Kingdom. The M.O.H paid particular attention to educating the manpower by offering scholarships to bright students for further education abroad. It also invited British medical doctors, surgeons and paramedical personnel to contribute in this sector. The British Council played vital role in forging these links between two countries. The Ministry of Health made great progress in this direction as indicated by the increase in the rates of annual growth of the health units and health manpower.(3)

The number of M.O.H. hospitals increased from 47 hospitals with 7.165 beds in 1970 to 191 hospitals with 28.140 beds in 2001. This expansion coincided with the growth in the number of primary health care centres from 519 in 1970 to 1.786 in 2001.

The Saudi health manpower trained both in U.K. and the U.S.A. made great strides in improving the health standards in all parts of the country. The number of specialist physicians rose from 817 in 1971 to 14.950 in 2001. The number of nursing personnel (both male and female and midwives) rose from 2.268 in 1971 to 36.495 in 2001. Allied Health personnel increased from 1.542 in 1971 to 21.392 in 2001. (4). The latest generation of qualified and competent personnel equally demanded an access to readily available health information.

Objectives of the Study

The main objective of this study is to shed light on the significance of health services and the vital role Saudi Government played in establishing the Ministry of Health. Moreover, how the Ministry foresaw the need to set up a Central Medical Library (C.M.L) at the Ministry of Health which would cater for the present and future requirements of the health information users. This study also outlines the C.M.L cooperation with the World Health Organisation in securing all its documents and publications and seeking assistance in training manpower. It also highlights the decisions and steps taken in strengthening C.M.L collections, maintaining close links with other medical libraries and participating in interlibrary loan ventures. The study proposes guidelines for the future growth and development of the CM and the use of electronic health information sources for the expansion of medical facilities and services. Finally, it enlists the existing C.M.L information resources and identifies the future requirements to keep pace with the massive flow of digital information.

Scope and Delimitations

This study is primarily concerned with the inception of the Central Medical Library set up by the Ministry of Health under the direction and supervision of the Chairman of the General Committee for Medical and Health Information. However, the study does not include other medical libraries in the Kingdom of Saudi Arabia and offers no comparison with other well established libraries.

Research Questions

The study is an attempt to address the following research questions :

To what extent has the Ministry of Health (M.O.H) succeeded in establishing the C.M.L and introducing user oriented services for the benefit of medical personnel?

What type of resources (human resources and health information) is available now in C.M.L ?

What kind of information services and automated library system are available in C.M.L ?

What is the nature of cooperation between the C.M.L and the WHO. And how far the C.M.L. has benefited from it especially in the area of acquisitions?

Methodology

Both the historical and the descriptive methods are deployed in gathering, collating, analysing and interpreting data and information. The methodology also includes seeking information through direct observations.

Moreover, the study is equally dependant on certain resources such as annual reports, documents and health statistical data health statistical year books and committee reports.

The case study has been specifically carried out to obtain comprehensive information about the C.M.L. In fact, case method has been used as a tool for exploratory study, to discover and describe what actually exists in Central Medical Library of the Ministry of Health and throws light its future plans for the development of the library.

Introduction

In accordance with he Ministerial Decree No. 1523 dated 20.7.1417 A.H. (1996). His Excellency the Minister of Health set up a committee called the "General Committee for Medical and Health Information " , composed of :

Dr. Mohammed A. Marghalani, Chairman, King Abdulaziz Univ.
Dr. Yahya Mahmoud Junaid, Member ,Imam Mohamed Univ.
Dr. Abdulrahman H. El-Ekrish . Member, King Saud Univ.
Dr. Nasser M. Al-Sweidan , Member ,Imam Mohamed Univ.

The main function of the Committee was to devise a feasible plan for the establishment of the Central Medical Library and simultaneously initiate the implementation of its plan in order to promote health and medical information activities and to set up an integrated medical information network .

The literature search revealed that a study on the establishment of a central medical library was conducted by Dr. Mohammad Salih Ashour, Professor of Library and Information Science at King Fahd University for Petroleum and Minerals. This study was virtually a plan for establishing the Central Medical Library which was approved by H.E. The Ministry of Health on 14.1.11419 A.H. (1998) .It was a comprehensive five years plan towards existing Central Medical Library in the Ministry of Health in Riyadh. The study suggested certain guidelines for the following areas: collection development and organization, staffing and organizational structure, information services, library automated system, library building, furniture and equipment. The proposal included a number of diagrams related to the interior planning of different areas in the library. It also proposed the location of the library building and the space required for reference services, lending services and information services, reader accommodation and

computer facilities for the users. However, this planning represented an effective model to develop the central medical library in Saudi Arabia, which can be considered as model to improve the health information sector.(5)

Furthermore, the Ministry of Health and World Health Organization (WHO), represented by Eastern Mediterranean Regional Office (EMRO) concluded an agreement on the development of the Library and making use of assistance offered by the WHO. in the field of health and medical information. This Agreement was approved by H.E. the Minister on 26.1.1420 A.H.(1999).

At present, health services cover not only the cities and towns , but also villages, hamlets and the countryside . The M.O.H. provides health care, both preventive and therapeutic, in addition to conducting medical scientific research and offering medical education programmes . The number of Health Institutes (male & female) reached 24 in 1999. meanwhile, the number of Health Colleges was 13 in 2001.

In addition to providing a country wide health service in the Kingdom, M.O.H. shoulders a heavy responsibility in offering health care facilities for pilgrims , whose number reached 1.132 thousands in 1998 . Approximately half of the total number of pilgrims pay visit to health centres and hospitals entirely operated by the Ministry .

Needless to say , such a vast health network operated by the M.O.H. needs a highly efficient and effective information system. National health information systems constitute the basis for becoming properly aware of the level , effectiveness and quality of health services, providing indispensable indicators for following-up the realization of the prescribed objectives. Furthermore, information systems are recognized instruments for decision-making and health planning . The M.O.H. has established since 1995, an information network covering 20 health directorates scattered through the Kingdom .

Again, demand for health information is constantly increasing nowadays, on the local, regional and international levels. To cope with all these diverse requirements, the Central Medical Library was established.

Location

The General Committee for Medical Information selected the building No.4. of the General Directorate for Health Institutes and Colleges at Sulaimania Riyadh as the site for the proposed Library. The library of the formerly Health Institute was located on the ground floor of this building, which has been expanded , refurbished and furnished to function as the Central Medical Library

The area of the library is approximately 400 square meters, and it consists of four open halls , for easy movement from one place to another, and as such the contents of the library are visible , and users are always readily seen .

Library Staffing Structure

The Committee headed by the present writer invited applications from qualified Saudi librarians for two professional positions in the Central Medical Library. After short listing suitable candidates, the interviews were held to ensure the selection of the most capable and competent librarians. They had earned Bachelor of Arts degree in library and information science and have gained some experience of running hospital libraries in Saudi Arabia. Another candidate holding a degree in accountancy with experience in data processing, spread sheets and Microsoft was appointed for inputting and retrieving bibliographical data. He also had the ability to use Horizon automated library system. In addition, a medical and health information specialist was given the responsibility of handling the C.M.L.'s information services and automated systems.

Library Collections

A. Medical Titles

The Central Medical Library has acquired a considerable number of medical and scientific books and reference tools. Some of the materials are purchased through publishers and distributors whilst a large amount of materials are gifted to the C.M.L by Saudi universities and various scientific organizations in the Kingdom. The World Health Organisation regularly supplies all its publications under the agreement.

As shown in Table (1),Appendix(A) there are 2504 medical titles, comprising 3536 volumes including 1288 titles are in English Language (%51.48), whereas, 1216 titles in Arabic Language (%48.56), in addition to miscellaneous reports and statistics which form part of the C.M.L collections issued by General Director of Health Affairs in all regions of the Kingdom.

B. Central Medical Library Current Practice

The C.M.L continues to acquire eighteen of the World Health Organisation 's medical journals and also receives all the reports, conference proceedings and occasional papers issued by the WHO.

C. Existing Journal Collections

It is the policy of the Central Medical Library to regularly subscribe to 138 medical journals published in Saudi Arabia and abroad. The Committee of Medical and Health Information and the Information specialist have decided to build a core collection, amounting to fifty one titles, covering almost all the notable medical subjects through the subscription method see (Appendix

Furthermore, the C.M.L policy is to acquire all Saudi medical journals, as national medical collections. As shown in (Table 2) (Appendix B), a total of 64 Saudi Medical journals, of which 20 (31,25 per cent) journals are in English. The list of Saudi medical journals includes the following types of Journals : Scientific Journals, Bulletins, and News Letters.

D. CD-Rom Collection and Data-bases

To develop electronic information resources in the medical sector, the C.M.L has a policy since 1997 of obtaining all the relevant CD-Rom collections to satisfy the existing needs of its users. Currently, a total of forty-five medical titles are available on CD-Rom. These have been produced by a number of medical organizations and professional associations, as shown in Table (5) (See Appendix E).

In view of the readily available databases of King Abdulaziz City for Science and Technology (KACST), Riyadh, it has been the practice of C.M.L. since 1999 to get access to health information sources by means of mutual cooperation.

E. WHO Depository Library

Agreement between C.M.L. and W.H.O.

In accordance with the Agreement between WHO's Eastern Mediterranean Regional Office (EMRO) in Alexandria, Egypt and the C.M.L in 1420 A.H./1999 A.D., M.O.H. Library has been officially recognized as the depository library for WHO publications in Saudi Arabia. Hence, C.M.L receives all WHO publications on a regular basis, including 18 medical journals. (see Appendix D) Consequently, the C.M.L. has built up a complete collection of WHO publications.

Library Automation System

As far as library automation is concerned, the Committee for Medical & Health Information considered two main aspects; first, the system has to be designed as client server architecture, secondly the Arabic version has to be available. Apart from these two considerations, the Committee also conducted a survey focusing on centres operating automated library systems. The survey included four libraries i.e. medical libraries located in Dubai and Al-Ayn in the United Arab

Emirates, Faculty of Medicine Library of the King Abdul Aziz University, Jeddah, and Library of the Ministry of Transportation in Riyadh Saudi Arabia.

The Committee for Medical and Health Information also decided in 2000 to have the Horizon Library system, as an Arabic Library Management System and as fully integrated Library system. Moreover, it is a true bilingual system, in the sense that it enables the library to create bilingual databases that contain both Arabic and English records in the same database .The Horizon Library System has turned out to be user friendly especially suitable for Saudi medical library users. The project has been carried out by Arabian Advanced Systems in Riyadh, Saudi Arabia, for the automation of following library operations and services: Cataloguing, Circulation, public Access Catalogue, Acquisition Systems, and the Internet System through IPAC for the physicians, nurses, pharmacists, allied health personnel, technical personnel and administrative personnel. At this stage the staff training was of paramount importance and therefore, both qualified librarians and a health information specialist were sent on a short library automation training course in April, 2001. The two weeks training programme comprised an induction for a day and the remainder nine working days were packed with practical demonstration and training. . In June, 2001 the Arabian Advanced Systems has installed the Horizon System, which included the server, type Compaq ML 350, Intel Pentium III 866 MHZ, 56 K which can be, upgraded to 250 MB, Microsoft windows 2000, server software with 5 users licenses and anti-virus package-per user .

The total of 8 pc and four printers are available, out of which three have been connected for Internet services .

Collaboration between C.M.L and EMRO

In February 1999, the General Committee for Medical and Health Information held discussions with Regional Information Office (RIO) officials in Alexandria, Egypt. EMRO promised to extend its full support to the C.M.L. in the following areas:

EMRO will provide the Library with a complete set of its publications e.g. documents, directories, newsletters, books, reference materials and relevant reports.

It will also provide a list of WHO publications for selection by the library, and then EMRO will pay out of the available funds for the selected items .

EMRO will extend its support to the Ministry of Health to purchase health literature (books, journals, CD-ROMs), using the Funds-in-Trust. This will allow

more and better utilization of these resources since the EMRO can negotiate with the publishers and distributors in order to obtain maximum discount for the C.M.L.

EMRO can make arrangements for the C.M.L. users to access relevant Websites for acquiring the latest factual information in the filed of medicine and surgery.

EMRO will assist in training the Central Medical Library staff both in Saudi Arabia and abroad.

During the last five years, EMRO has honoured its commitments to the C.M.L. not only in the areas of collection development, manpower training and technical advisory services but also in acquisition of electronic resources and the implementation of Horizon Library Systems.

Findings and Recommendations

Based on the investigation conducted in the course of this study, it has been discovered that since 1998 the Ministry of Health has shown its determination for the consistent development of the Central Medical Library in Riyadh.

A total of 2687 titles constitute the library collections in all forms of information resources. The plans are underway to acquire more medical literature in non-print formats. The C.M.L has adopted the Horizon Automated Library System in since 2001 .

The number of books selected and the range of major subjects covered are adequate for the current library users. They equally have easy access to other medical libraries in Riyadh and the users also make optimum use of C.M. L. interlibrary loan facilities. The Internet Services are available in C.M.L since Sept. 2001. Furthermore, the coordination and cooperation between the Central Medical Library at the Ministry and EMRO is maintained specifically in the area of training the staff and information technology.

Based on the findings of this study , the following recommendations will be productive and purposeful for the development of the Central Medical Library

1-To develop the Library database and make it available on the Ministry's Local Area Network, and eventually on the Internet.

2-To develop a scheme for document delivery services to allow a regular "postal service" between the Ministry and the Library.

3-To develop promotional activities to inform the Ministry staff about the existence of the Library and its services .

4-To develop library orientation and training activities for Ministry staff and health personnel on how to utilize library resources, search database such as MEDLINE, Ovid and the Internet.

5-To provide better communication facilities for the Library to allow access to other libraries in the Kingdom.

6-To publish and broadcast information on the Internet using the Web and other technologies as one way of reaching out to potential users of health information in Saudi Arabia .

7-To establish branch medical libraries in each region in the country under the supervision of the Central Medical Library .

8-To issue and enforce Library's Regulations in order to facilitate and make better use of the Library's services .

9-To persuade the departments of Library and Information Science in Saudi Universities to review their curriculum and include health information related courses in order to produce health information specialists. The newly qualified manpower should be competent to run the medical libraries and be familiar with the use of electronic sources of health information.

The Ministry of Health should vigorously support the continuing professional development of medical librarians.

The Saudi Universities Department of Library and Information Science should introduce short course in the fields of Health Information Resources; Electronic Medical Databases; Management and Delivery of Health Information and User Education in Medicine.

The C.M.L. should move forward in developing partnerships with the following Libraries:

King Khalid Hospital Library; King Faisal Specialist Hospital Library; King Abdul Aziz Hospital College of Allied Medical Sciences Library and the Riyadh Central hospital Library.

The Co-operative ventures should be launched and inter-lending coordination amongst the medical libraries should be strengthened.

The C.M.L. should increase the number of professional library staff and offer Current Awareness and Selective Dissemination of Information Services to its users. The future medical librarians should be sufficiently equipped with new range of skills to successfully manage and develop the services and resources.

The Web and Intranets have become popular and important elements of health information and the Ministry of Health should support the C.M.L. in promoting the

use of these services. Moreover, special attention should be directed towards the development of digital resources and the acquisition of a very wide variety of electronic sources of medical information.

References

- (1) Ministry of Health, Health over a Century. Riyadh; ASBAR for Studies, 1999.p.33.
- (2) Ibid. p. 57.
- (3) Ministry of Health, Health Development during the reign of King Fahd (In Arabic), Jeddah: Sarawat for Publishing. 2001. p. 17, 57.
- (4) Ministry of Health, Health Statistical Year Book, 2001. Riyadh: Al Madinah Press, n.d., p. 119.
- (5) Mohammed S. Ashour, A proposed planning of Establishing a Central Medical Library. Ministry Of Health, Riyadh: 1999.

Table (1) Appendix (A)

Medical Titles 2002

Subject	No. of Titles in English	No. of Titles In Arabic
References [®]	34	2
Medical Informatics	17	5
English Language	15	-
ACML (Arab Centre for Medical Literature)	-	51
Organization of Islamic Medicine	16	18
Preclinical Subjects		
Human Anatomy (QS)	32	3
Physiology (QT)	13	-
Biochemistry (QU)	24	35
Pharmacology (QV)	109	33
Bacteriology & Immunology(QW)	39	4
Parasitology (QXX)	18	5
Clinical Pathology(QY)	9	3

Pathology (QZ)	18	5
Clinical subjects		
Medical Profession(W)	95	537
Public Health	110	106
Practice of Medicine (WB)	55	8
Infectious Diseases (WC)	33	108
Diseases of Allergy (WD)	19	-
Musculoskeletal System (WE)	59	57
Respiratory System (WF)	18	21
Cardiovascular System (WG)	30	8
Haemic and Lymphatic System (WH)	19	2
Gastrointestinal System (W)	18	3
Urogenital System (WJ)	17	5
Endocrine System (WK)	10	9
Nervous System (WL)	22	8
Psychiatry (WM)	14	7
Radiology (WN)	42	13
Surgery (WO)	73	6
Gynaecology (WP)	25	1
Obstetrics (WQ)	21	35
Dermatology (WR)	20	11
Paediatrics (WS)	84	33
Geriatrics chronic Diseases (WT)	4	7
Dentistry , Oral Surgery (WU)	38	15
Otorhinolaryngology (WV)	8	-
Ophthalmology (WW)	27	16
Hospitals (WX)	3	13
Nursing (WY)	71	20
History of Medicine (WZ)	-	1
Related subjects		
Psychology (BF)	1	4
The Family , Marriage life (HQ)	-	1

Chemistry (QD)	3	-
Natural History (QH)	3	-
Botany (QK)	-	1
Zoology (QL)	2	1
Total	1288	1216

Table (2) Appendix (B)
Saudi Medical Journals (2002)

Subject	No. of Titles
Internal Medical & General Medical subjects	27
Surgery	3
Pharmacy & Drugs	8
Dentistry	3
Ophthalmology	2
Nuclear Medicine	3
Physical Therapy	6
Ductless Gland & Digestive System	4
Public Health	4
Nutrition	1
Environnent	1
Pedigrees	1
Psychiatrie	1
Total	64

Table 3 Appendix (C)
Medical Journal

s.No.	Title	Publisher	Freq.
1	Aging Clinical and Experimental Research	Editrice Kurtis	B-M
2	Aids Patient Care	Mary Ann Liebert	M
3	American Journal of Epidemiology	The Johns Hopkins University School of Hygiene and Public Health	B-W
4	American Journal of Nursing	Lippincott	M
5	The American Journal of Tropical medicine Hygiene	The American Society of Tropical Medical and Hygiene	M
6	The American Journal of Psychiatry	American Psychiatric Association	M
7	Annals of the Rheumatic Diseases	BMJ Group	M
8	Annals of the Royal College of Surgeons of England	The Royal Collage of Surgeons of England	B-M
9	Asian Medical Journal	Japan Medical Association	M
10	Bioscience	American Institute of Biological Sciences	M
11	British Medical Journals	The British Medical Association	W
12	British Journal of Obstracts and Gynaecology	Elsevier Science	M
13	Bulletin of the Medical Library Association	Silverplatter Information	Q
14	Chest	The American Collage of Chest Physicians	M
15	Circulation	Lippincott William & Wilkins	W
16	Clinical Infection Diseases	The University of Chicago	M

17	Diabetes	American Diabetes Association	M
18	Fertility and Sterility	Elsevier Science Inc.	M
19	Health Education and Behaviour	Sage Publications	M
20	Heart and Lung	Mosby	B-M
21	International Dental Journal	FOI World Dental Press	B-M
22	The Journal of Hospital Infection	The Hospital Infection Society	M
23	The Journal of Clinical Investigation	The American Society for Clinical Investigation	B-M
24	Journal of Clinical Microbiology	American Society for Microbiology	M
25	JAMA (The Journal of American Medical Association)	American Medical Association	W
26	AIDS	Lippincott Williams and Wilkins	18 Times /Y
27	Journal of Medical Screening	BMJ Group	Q
28	The Journal of Paediatrics	Mosby	M
29	The Journal of The American Dental Association	American Dental Association	M
30	Journal of the American Health Information Management	St. Anthony	M
31	The Lancet	BMA/BMJ. BMA House	W
32	Managing Information	Sarah Blair	10Times/y
33	Medical Care	Lippincott William & Wilkins	M
34	Medical Education	Blackwell science Limited Oxford	M
35	RCM Midwives Journal	TG Slot son Ltd., London	M
36	The New England Journal of Medicine	BMA/BMJ. BMA House , Tavistick Square , London	W

37	Nurse Education Today	Churchill Livingstone London	8/Year
38	Nursing Times	Greater London House ,Hempstead road London NW1 7 EJ	W
39	Nutrition Reviews	International Science Institute	Life M
40	Pest Control	Advanstar Communication	M
41	International Journal of Pharmaceutical Medicine	Lippincott Williams and Wilkins	B-M
42	Postgraduate Medicine	The Mc Group - Hill Companies	M
43	Public Health Nursing	Blackwell science	B-M
44	Synergy News	Dominicdeeson	M
45	Sexually Transmitted Diseases	The Association by Lippinott Williams and Wilkins	M
46	Study in Family Planning	Population council	B-M
47	Teaching and Learning in Medicine	Lawrence Erlbaum Associates	Q
48	Tuberculosis	Churchill Livingstone	Q
49	Vaccine	Elsevier Amsterdam Holland	M
50	Water and environment International	Peter De Lacy	B-M
51	Water Research	Paragon	Volume/Yea (18 Issues)

Table 4 Appendix (D)
W.H.O. Medical Journals

S.No	Title	Freq.
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1	Weekly Epidemiological Record Relive Epidemologique Hebdomad ire	W
2	Health Services Journal of the Eastern Mediterranean Region	Irr
3	WHO Drug information	Q
4	The Health Services Researcher	Q
5	WHO Chronicle	B-M
6	Vaccine and Immunization News	B-M
7	World Health Forum	Q
8	World Health Statistics Quarterly Report Tinstriel De Statistiques Sanitarians modules	Q
9	WHO Eastern Mediterranean Environmental Health, Newsletter	Q
10	WHO DOC	B-M
11	Bulletin of The World Health Organization	B-M
12	International Digest of Health Legislation	Q
13	Eastern Mediterranean Region Epideminogical Bulletin	Q
14	WHO Newsletter (in Arabic)	B-M
15	Eastern Mediterranean Health Journal	3/Year
16	World Health Forum (in Arabic)	Q
17	World Health (in Arabic)	Q
18	WHO Proceedings (in Arabic)	Q

Table 5 Appendix (E)

Medical CD-Rom Collections

s.No	Title
1	Unified Medical Dictionary (2000)
2	Physical Principles Explained (1999)
3	Child Health Nursing (1999) (2 copies)
4	Clinical Medicine (1997)

- 5 Ferri's Clinical Advisor Instant Diagnosis and Treatment (1999)
- 6 Instructor's Toolkit for Managing Stress i Emergency Medical Services (2000)
- 7 Practical General Practice(1999)
- 8 Medical Information on the Internet (1999)
- 9 URGE Roma'99(7 the United European Gastroenterology Week, 13-17 Nov.1999)
- 10 Textbook of Clinical Neurology (1999)
- 11 Interactive Dental Office (1999) (2 copies)
- 12 Understanding Pathophysiology (2000)
- 13 Guide to Physical Examination (4th Edition) (1999)
- 14 Nursing Care of Infants and Children (1999)
- 15 Fundamentals of Nursing (4th Edition) (1999)
- 16 The Second Pan Arab Paediatric Nephrology Congress (2000)
- 17 Saudi Med Base (Sponsored by Saudi Medical journal 1975-1995 (3copies)
- 18 British Pharmacopoeia (1999) (2copies)
- 19 Sick Not Sick (A Guide to Rapid Patient Assessment) (2000)
- 20 Choices for the poor
- 21 Pathology (1996)
- 22 Paediatric Education for Prehospital Professionals(2001)
- 23 Heart saver Facts (1999-2000((2 copies)
- 24 Interactive Atlas of Clinical Anatomy (1997)
- 25 Saunders Electronic Atlas of Dermatology (1996)
- 26 Imaging Atlas of Human Anatomy (1997)
- 27 CD-Atlas of Sexually Transmitted Diseases and Aids (1997)
- 28 Introduction to Clinical Imaging (UCSF Interactive Radiology Series) (1999)
- 29 Rheumatology (1996)
- 30 External Diseases & Cornea: A Multimedia Collection (Refractive Surgery Supplement) (2000)
- 31 The Breast: Diagnosis, Imaging, Management, and Pathology (1999)

- 32 12-Lead EGG Interpretation (1998)
- 33 Mastering MIR Musculoskeletal System (1996)
- 34 Du Vivre Dermatology Imagemback (1998)
- 35 Cecil Textbook of Medicine (1998)
- 36 Personal Eyes (1999)
- 37 Ophthalmic Images (1998)
- 38 Health Mapper and Data Manager
- 39 LEO Clinical Update Course on Retina (1998)
- 40 Primer on Kidney Diseases (2nd Education) (1998)
- 41 Mokby's Primary Care Medicine (Rapid Reference) (1997)
- 42 Oxford Textbook of Medicine (3rd Education) (1996)
- 43 Health & Neck Surgery – Otholaryngology (1996)
- 44 Schiff's Diseases of the Liver (8th Education) (1999)
- 45 Head and Neck Surgery (1997