



## Article

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# APPLICATION OF ICT TO HEALTH INFORMATION SERVICE; THE EXPERIENCE OF THE MEDICAL LIBRARY OF NNAMDI AZIKIWE UNIVERSITY, NNEWI

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### **Abstract**

*The article highlights the Medical Library of the Nnamdi Azikiwe University, Nnewi by describing its efforts in applying information and communications technology to information dissemination as well as the impact of ICT to its user community. To derive the data for this study, copies of a questionnaire were distributed to users of the library to access the impact of ICT on information access and retrieval. Majority of the respondents access computer based literature for research purposes; majority also rated wide access to world literature and availability of current information as the most important benefits of ICT to information access and retrieval. Development of electronic libraries as an integral part of the traditional library system is suggested as the current means to enable libraries meet the challenges of the digital age.*

### **INTRODUCTION**

Health is defined by the World Health Organization as the state of complete physical, social and mental wellbeing and not merely the absence of disease or infirmity. People need correct, relevant and up-to-date information in order to make the right health decisions. For effective health care provision, health care practitioners require access to relevant and current information on safe health practices, effective care, preventive measures and treatment modalities. For the patient, the information for optimum health embraces preventive strategies, treatment options and disease control.

In a tertiary medical institution, health practitioners play the dual role of providing health care services to the general populace as well as teaching as academic staff members of the University. So, apart from the normal need of information for clinical

purposes, information is also needed for teaching and research. Information provision must therefore take cognizance of this dual need. Information service is an organized dissemination of relevant information needed by any recipient that requires it for decision making. There are many aspects of such information service ranging from document delivery, providing answers to questions, down to literature search. These embrace library services as well as the provision of Information using modern information technologies. Oduwole [2000] stated that there is tremendous amount of new medical information being produced in various languages and in large numbers. This is why qualitative information centres are necessary to provide the much needed support. Akiode [2005] noted that Nigerian resident doctors are at a disadvantage compared with their counterparts in the developed world because they do not have access to the latest health information in the internet or from other medical libraries. The libraries are not well funded so they do not have adequate number of regular periodicals nor can they subscribe online to many e-journals.

The medical library is an important information resource in any medical institution. Serving the health information needs of a community should therefore be able to filter out relevant health information from the maze of available information, and package them for effective use by identifying and evaluating books, journals, reports, audiovisual resources, CD - ROMs and other ICTs relevant to the work of her user community. Such a medical library should be:

- a) a source of rapid access, for the retrieval and transfer of information
- b) a focal centre which emphasizes the importance of information and knowledge towards the resolution of human health needs.

### **Profile of the Medical Library**

The Medical Library located at the Nnewi Campus of the College of Health Sciences of the Nnamdi Azikiwe University, is a network of three libraries. The Main library is located within the premises of the Nnamdi Azikiwe University Teaching Hospital. Of the other two libraries, one is on the Pre-Clinical Campus at Okofia also in Nnewi whilst the other is at the Diagnostic and Healthcare Centre at Neni in Anaocha Local Government Area of the State.

This library started in 1986 with a small collection that served the needs of the Pre-Science programme of the former Anambra State University of Technology [ASUTECH] and was housed in the building which served as the library of the former Teachers'

Training College at the Okofia premises. Following the upgrading of the Campus to a full fledged Medical College for the training of doctors and other health practitioners, a fuller Medical Library was established in 1992 and located within the premises of the Nnamdi Azikiwe University Teaching Hospital in a temporary accommodation. In the year 2000 a purposefully built Medical Library Complex also within the premises of the Teaching Hospital was completed and the library was relocated.

The Medical Library serves both the College of Health Sciences and the Teaching Hospital, by providing health-related information, literature and other material support for the attainment of the objectives of these institutions. These include the information on the training of medical and paramedical personnel at the undergraduate and postgraduate levels, acting as tertiary referral medical centres involved in providing effective health services to her target populace and also providing facilities for research and development in areas of human health and diseases. The user community comprises all teaching staff, medical and paramedical personnel, and undergraduate and postgraduate students of both institutions. Outside users who have need for the resources are also given access to the collection.

The total collection of the library is about 18,547 books and 568 journal titles. Out of these numbers 33 foreign journals and 26 local titles are on current subscription. In line with the nature of the user community, recency is the most important criterion for resource selection. Since inception, the Medical Library has continuously received gifts from well meaning individuals and organizations which have tremendously enriched the collection.

### **IMPORTANCE OF ICT TO HEALTH INFORMATION DISSEMINATION**

Information and communications technology [ICT] has revolutionized information dissemination in recent times. Apart from providing a wider access to world literature, it has also succeeded in providing timely information to users by reducing the time-lag between generating and accessing of useful information as compared with traditional sources where delay in processing may lead to the available information often being superseded by more recent research even at the time of publication. This advantage is very important in medical information dissemination.

Eng [1998] was of the opinion that information and communications technology may help reduce health disparities through their potential for promoting health, preventing disease, and supporting clinical care for all. According to Barker [2003] the internet

appears to have promises as a means to disseminate information about health and health care, enhance communication and facilitate a wide range of interactions between patients and health care delivery. These kinds of changes could produce important improvements in health care and ultimately, the health of the population. Spielberg [1998] asserted that the e-mail and the internet have already begun to transform the boundaries of communication within the medical context. Clayton and Hripesak [1995] have also observed that computer systems have long been promoted for their potential in improving the quality of health care, including their use to support clinical decision making.

Access to information through ICT has opened a wide door of opportunities to African researchers who before relied heavily on only traditional libraries for journals and books to satisfy their information needs. The problem created by dwindling library budgets and the paucity of traditional library resources has affected the capacity of libraries to meet these needs. Added to these problems is the dearth and unpredictability of local book and journal publications. Balianynte [2003] wrote that we are seeing massive changes in the way researchers in developing countries communicate with one another and in how they produce and gain access to information. If they are connected to ICT and have access to its essential skills, they can keep in touch with their peers at the click of a few buttons, rapidly publish and disseminate their own work, and browse through whole libraries of reports and data, as well as download the latest ideas needed for their work. Bui despite the potentials of ICT, as noted by Bob [2002] health information providers in Africa continue to work with their hands tied due to lack of these facilities.

This paper is, therefore, a highlight on the Medical Library of the College of Health Sciences, Nnamdi Azikiwe University Nnewi, including the state of information and communications technology [ICT] development in that library.

### **APPLICATION OF ICT IN THE MEDICAL LIBRARY**

The application of information and communications technology to the dissemination of health information in the College of Health Sciences Medical Library began with the acquisition of a computer unit in 1999 with the aim of providing MEDLINE services. The first search was done in February 2000.

Medline-on-CD is a bibliographic database of the United States' National Library of Medicine which provides access to the abstracts of a wide range of journal articles published in medicine and other related fields, all over the world. It was managed as a self sustaining not-for-profit service, with only a little fee charged for the search and printing. The service enjoyed good patronage until the Medical Library became a member of the HINARI Network in 2006 which provides access to publications in medicine just like Medline. Health InterNetwork Access to Research Initiative [HINARI] is an initiative of the World Health Organization which provides online access to research in medicine and healthcare for librarians and scientists as both abstracts and full texts. There are about 3680 journals plus databases and references available through HINARI, including titles in 15 different languages and covering the full spectrum of medicine, healthcare, and related social sciences. In February 2005, the College of Health Sciences ETF-ICT facility was officially commissioned to provide wider internet facilities to the College. It began with 35 computers spread all over the departments of the College including the Medical Library. Unfortunately this service was short-lived as it was disconnected in January 2006. However efforts are on to restore it.

### **IMPACT OF ICT ON THE USER COMMUNITY**

To find out the impact of Medline and other ICTs on the user community, the researcher undertook a survey. A questionnaire was produced and copies were distributed to regular users of the services. 60 copies of the questionnaire were distributed; 57 copies were completely filled and returned giving a 95% response rate. Table 1 shows the nature of the responses:

**Table 1: Nature of the Responses**

<b>Respondents</b>	<b>No. of Responses</b>	<b>Percentage</b>
Medical Doctors	28	49.1
Teaching Staff	15	26.3
Postgraduate students	9	15.8
Medical Lab Scientist	5	8.8
<b>Total</b>	<b>57</b>	<b>100</b>

## Results

### a) Reasons for Accessing Computer-Based Literature

Respondents were asked to state the reasons for accessing computer - based literature in comparison with traditional sources.

**CHART 1**  
**Reasons for Accessing Computer - Based Literature.**

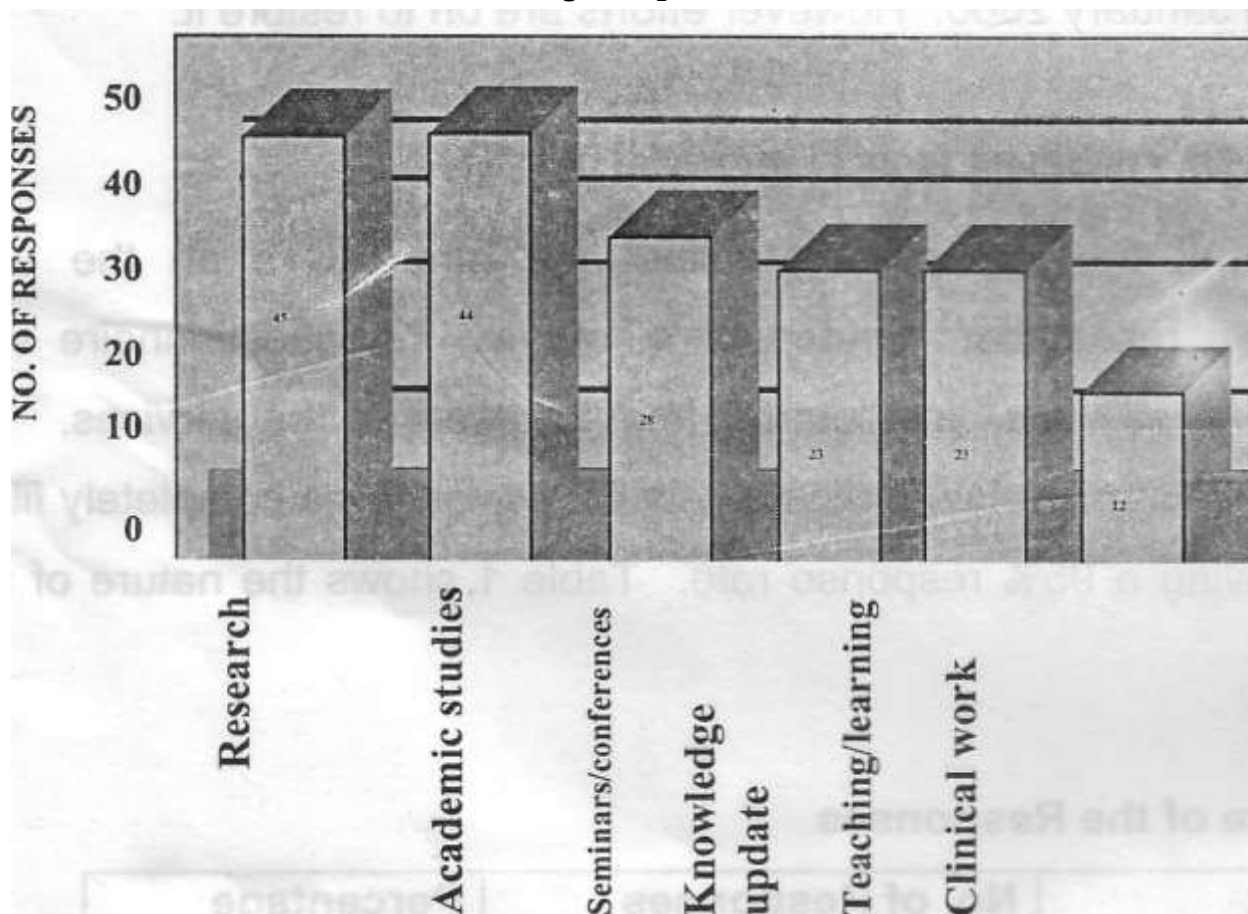


Chart 1 shows that 45 [79%] access Medline and other ICTs is for research purposes, 44 [77.2%] is for academic studies, 28[49%] is for seminars and conferences, 23 [40.1%] is for knowledge update and writing of lecture notes, an equal number of 23 [40.1%] is for teaching and learning, whilst 12 [20.1%] access ICTs is for clinical work.

### b) Importance of ICT to Information Access and Retrieval

Respondents were asked to indicate two options they considered as the most important in terms of the usefulness of ICT to information retrieval. The chart below shows the responses:

**CHART 2**  
**Importance of ICTS in Information Access and Retrieval**

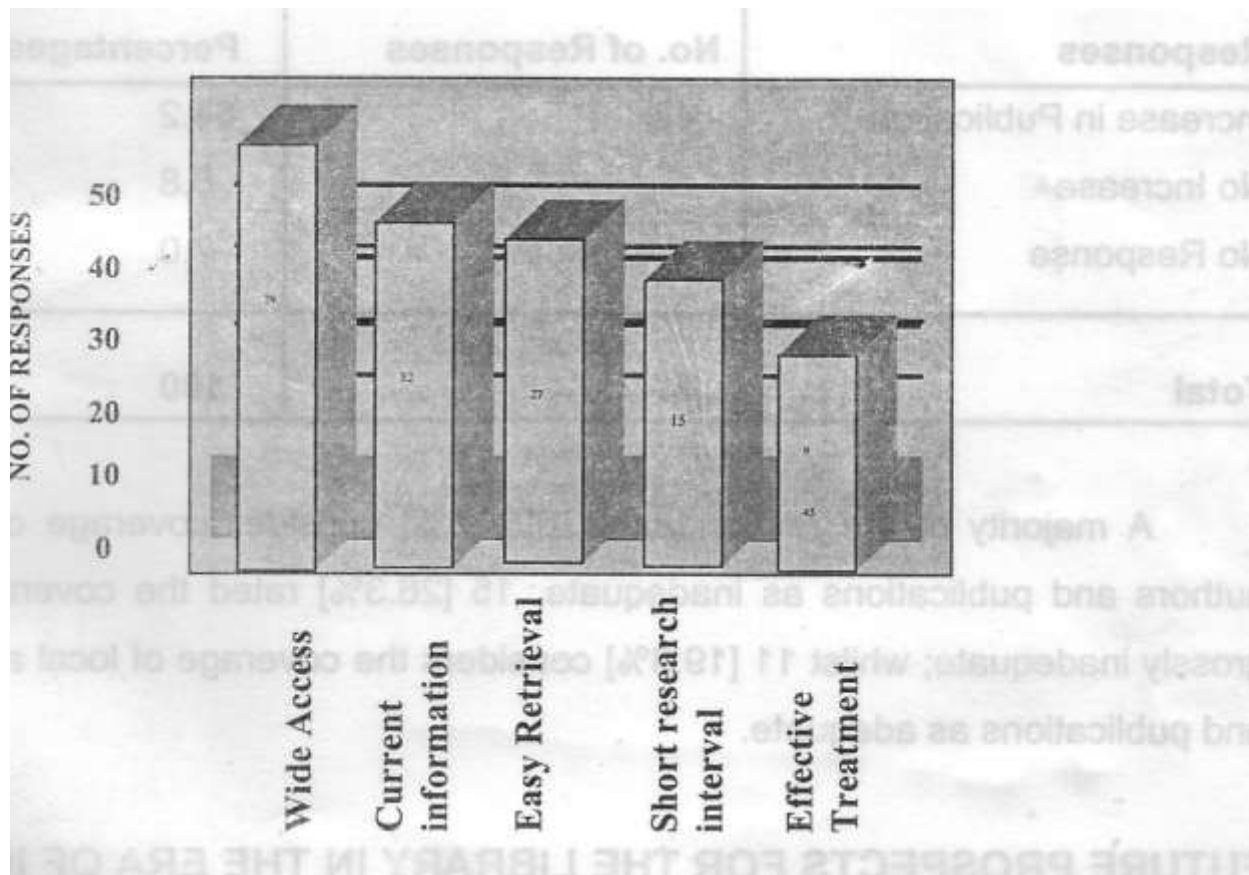


Chart 2 shows that respondents rated wider access to world literature and the availability of current information as the two most important benefits of ICT in information retrieval. ICT was rated as being least useful for Information on effective treatment.

#### **e] Research Output**

42 [73.7%] of the respondents indicated that with the use of ICT, they have begun and completed more research at a relatively short time, while for 11 [19.3%] of the respondents, ICT has not affected their research time interval.

**Table 2: Research Output Due to ICT**

<b>Responses</b>	<b>No. of Responses</b>	<b>Percentages</b>
Increase in Publication	48	84.2
No Increase	5	8.8
No Response	4	7.0
<b>Total</b>	<b>57</b>	<b>100</b>

A majority of the respondents 30[52.6%] consider coverage of local authors and publications as inadequate. 15 [26.3%] rated the coverage as grossly inadequate; whilst 11 [19.3%] considers the coverage of local authors and publications as adequate.

### **Future Prospects for the Library in the Era of ICT**

From the library survey, respondents acknowledged the positive importance and impact of ICT on their professional and academic development. In these days of greater access through electronic media, the role and scope of the library must be redefined for her to remain even more relevant as an important information resource. This is very important for those involved in scientific and medical information dissemination.

We are witnessing a shift from dependence on traditional resources to digital forms. To maintain patronage, library acquisitions must be geared towards the development of electronic resources as part of the mainstream library services, because there are greater potentialities in this area. Just as the library collects traditional resources, equal emphasis should be laid on the acquisition and processing of CD - ROMs of both bibliographic databases and full text as an integral library resource. Libraries should also subscribe to e-journals with restricted access by paying the necessary fees and keeping the passwords on behalf of their users. Digitization should be made an immediate and long term goal. Sharing partnerships should be established with other digital libraries in order to expand the scope of local libraries. All these can be part of the resources at the disposal of the library in meeting the information needs of her users.

### **Conclusion**

The Medical Library is a very important information retrieval system in this era of wider availability of medical resources using the ICT. For the better health of the entire society, librarians should see ICT as a very important and timely tool to be harnessed



for the provision of relevant information. In fact proper incorporation of the technology will lead to a much greater efficiency in health information provision.

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