



Impact of library intervention on Resident Doctors use of online health Information resources in Nigeria.

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Abstract:

Background: *There has been a proliferation of online health information resources because of their importance to effective healthcare delivery and need for the practice of evidence-based medicine. Free access had also been offered to encourage users especially in developing countries. There is need therefore to assess doctors' knowledge and use of these resources to inform training.*

Objective: *to assess residents' knowledge and use of online medical literature and services before and after library intervention.*

Method: *A survey was sent to resident doctors at Nnamdi Azikiwe University Teaching Hospital (NAUTH) in January 2011. The questions covered knowledge and use of electronic resources and training needs. This was followed by library training between March and April 2011. The survey was re-administered in January 2012 to assess impact.*

Result: *Before the intervention, of the 125 respondents, 24% do not know of the existence of medical online databases. Only 39% have used the Cochrane library in the last three months, while 48% do not know of its existence. However 92% indicate they need training.*

After the intervention, almost all (98%) know of the existence of the online databases and services. Of the 121 respondents 71% had used the Cochrane library in the last three months. In fact increased knowledge and usage were recorded.

Conclusion: *Doctors can have better knowledge and improved access to online medical literature and services through medical library intervention.*

INTRODUCTION

Health information is that knowledge facts and news generated from various sources, necessary for good physical and mental conditions of human beings. The delivery of health information generated from research and other sources to medical doctors is done through health information resources. Health information resources therefore are the media of communication between scientists who conduct health care and biomedical research and doctors who use their results in medical practice and related purposes. These vehicles in broad terms are text or print resources, internet or World Wide Web resources and human resources.

The internet which began in 1969 as a net project of the United States Department of Defense has undergone many transformation to date. Garcia, Teruel and Pinero (2005) state that statistics about the size of the internet fluctuate, but always agreed that it is almost unlimited. The quantity of more than three billion Web documents has been quoted (Powell and Garke, 2002), a quantity that doubles, according to current assessment every 173 days(Mareno,2000).Of this, pages concerned with health is about 2% (Garcia et al, 2007), and this is what doctors world wide access for their desired health information.

The internet is very useful for health information dissemination and guidance. It provides information that is up to the minutes, international in scope and sometimes not available elsewhere (Dalgeish and Hall, 2000). Resident doctors are doctors – in training who need online health information to strengthen their capacity, especially in Nigerian teaching hospital setting where they form the bulk of the practitioners.

Yet, it has been observed that the regular use of these resources in harvesting health information for evidence-based practice and effective health care delivery is yet to be routinely practiced among the doctors.

Lack of awareness of these resources and skills for accessing them may be behind this. In view of this, it became necessary for the medical library to intervene by assessing resident doctors' use of these resources and making up for the lapses. The findings may be useful to the Medical and Dental Council of Nigeria, the Ministry of Health and other medical education regulatory bodies for curriculum modification and policies.

MATERIALS AND METHODS

The study was conducted during the regular monthly meeting of the Resident Doctors at Nnamdi Azikiwe University Teaching Hospital on the last thursday of Jan 2011, and the same period in 2012.

The questionnaire divided into four sections solicited information on bio-data; computer literacy, Internet access, location and usage; knowledge and use of electronic resources; and training needs.

ETHICAL CLEARANCE:

Application was sent to Nnamdi Azikiwe University Teaching Hospital Ethical Committee in November 2009. The ethical approval was obtained on the 29th of October 2010. Also the Nigerian Medical Association (Nnewi zone) granted its permission for the survey to be carried out.

Medical Library Intervention

Lectures were conducted during the resident's monthly meetings in March and April 2011. The paper exposed the residents to a wide spectrum of available internet health information resources, their contents, access avenues and uses. These included online databases, online journals, e-books, clinical information services, health discussion groups and fora. Doctors data including –names, e-mail addresses, ranks, specialties and phone numbers were compiled and constantly used to connect the residents to appropriate websites and online health groups and services like HIFA2015,K4Health,John Hopkins white papers etc.

RESULTS

All the meeting attendees (125 in 2011 and 121 in 2012) out of the about 167 residents filled copies of the self-administered questionnaire. The survey data were checked for completeness on

site. Of the respondents 85% were males and 15% females. Their ages ranged from 25-49 years with majority (51%) within 30 – 34 years age bracket.

All the respondents studied in Nigeria. Their current status showed that 62% were Registrars and 38% Senior Registrars. Marital status revealed 57% married and 38% still single.

Section B: computer literacy, internet access, location and usage.

Computer ownership.

In 2011, 94% had their personal computer while 6% did not.

In 2012, 96% owned computers while 4% did not.

Computer literacy

In 2011, 92% were computer literate while 8% were not.

By 2012, 96% had become computer literate while 4% were yet to comply.

Level of computer literacy

In both years 6% of the respondents rated themselves as experts in computer usage, 32% rated their performance as above average, majority (46%) rated themselves as average, 12% below average, while 2% admitted they were beginners.

Internet use

In 2011 most respondents (96%) used the internet, only 4% did not, while in 2012 almost all (98%) used the internet while 2% did not.

Location of internet access

In 2011 and 2012 equal number of respondents (36% each) indicated they used the internet mainly at work and also both at home and at work.

In 2011, 10% used the internet at home, while 18% used the internet at home in 2012. In 2011, 18% of the respondents used the internet in the medical library, while usage in the library dropped to 10% in 2012. None used the cyber café in both years.

Internet connection of personal computer

In 2012 majority of the respondents (80%) had their personal computers connected to the internet, while 20% indicated otherwise.

In 2012 respondents indicated 92% had their personal computers connected to the internet, while 8% hadn't

Source of internet connection

In 2011, hospital internet connection was used by 58% of the respondents, 41% used personal modem and 19% medical library connection. In 2012 hospital internet connection use divided to 39% while majority (61%) used their personal modem and none used the medical library connection.

SECTION C: Knowledge and use of electronic resources.

Existence of the resources:

Before library intervention in 2011, 76% of the respondents were aware of the existence of online databases, while 24% were not.

In 2012 almost all (97%) indicated they were aware and only 3% stated otherwise.

Purpose of use of resources:

There is no remarkable difference in their purpose of use of online resources before and after the intervention. Almost all indicated they use the resources for clinical care of patients, professional examinations, better practice of specialty and for research and publication.

Use of specific online resources: remarkable improvement was recorded following intervention by the medical library (table 1).

	Before intervention		After intervention	
	Used	Not used	Used	Not used
a. Medline	64%	36%	86%	14%
b. Pubmed Central	58%	42%	79%	21%
c. Biomed Central	36%	64%	82%	18%
d. CINAHL	16%	84%	61%	39%
e. DOAJ	36%	64%	92%	8%
f. Cochrane library	40%	60%	71%	29%
g. Trip	2%	98%	48%	52%
h. Embase	4%	96%	44%	56%
i. E-mail discussion lists/groups	50%	50%	92%	8%
j. Ebsco journal services	6%	94%	62%	38%
k. Hinari	44%	56%	80%	20%
l. Popline	24%	76%	24%	76%

SECTION D: training

In both 2011 and 2012 almost all the respondents indicated interest in skills acquisition for better use of the internet resources.

DISCUSSION

The study is limited to only one rank of doctors in the teaching hospital. Only doctors of the rank of senior registrars and registrars are regarded as residents in the teaching hospital under study.

All the respondents were given copies of the questionnaire on signing the meeting attendance register, and they all returned them before leaving the meeting hall. Doctor's cadre of the medical workforce in Nigeria had always shown more male than female practitioners. All the respondents read medicine in Nigeria probably because of the increasing number of medical schools in the country. Greater number of them were married (57%) probably considering their ages.

It is cheering that most of the doctors had their personal computers and also can use the internet. The use of the internet at the medical library is very low. The use of personal modem must have affected the low use of hospital and medical library connections. Internet modem is convenient to use and sometimes stronger than the general server. After the intervention, result also show that the knowledge and use of the electronic resources increased.

Inconsistent power supply featured here just like in many other studies as a major barrier to use of the online resources. It is amazing that all respondents knew they needed training, even after the library intervention. This is a serious pointer to the need of including internet use skills as a regular feature of the residents' career.

CONCLUSIONS

Doctors can have better knowledge and improved access to online medical literature and services through medical library intervention. Medical library should step up its role of influencing the use of health information resources by doctors for evidence-based health practice and effective health care delivery.

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