

**To cite this article:** Moyosore O. Adegboye & Samuel Adeyoyin (2020) Health Information Resources Accessibility as Predictors for Clinical Decision making among Doctors in Obafemi Awolowo University, Ile-Ife, Nigeria. *Information Impact: Journal of Information and Knowledge Management*, 11:4, 81-91, DOI: <https://dx.doi.org/10.4314/ijikm.v11i4.8>

**To link to this article:** <https://dx.doi.org/10.4314/ijikm.v11i4.8>

## Health Information Resources Accessibility as Predictors for Clinical Decision Making among Medical Doctors in Obafemi Awolowo University Ile-Ife, Nigeria

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### Abstract

The study evaluates health information resources as predictors for clinical decision-making among medical doctors in Obafemi Awolowo University Teaching Hospital Ile-Ife. A survey research design was adopted by the study and random sampling technique was used to select 265 medical doctors from a population of 822. Primary data were obtained on socio-economic characteristics of the respondents, level of accessibility, frequency and various core skills of health information resources using a structured questionnaire and focus group discussion (FGD). Data were analyzed using frequency counts, percentage and mean. Results revealed that 59.8% of the respondents were male while 51.1% were female. Findings, however, showed that pattern recognition from experience ( $\bar{x} = 3.32$ ), critical thinking without emotion ( $\bar{x} = 3.16$ ), hypothesis updating ( $\bar{x} = 3.607$ ) and perception based confidence ( $\bar{x} = 2.97$ ) were the core skills used by the medical doctors in clinical decision making. The focus group discussion emphasized that medical doctors should possess critical thinking without emotions and good time pressure balance in order to make accurate clinical decisions. The study concludes that medical doctors have quality access to health information resources to make clinical decisions. The study, therefore recommended regular trainings of medical personnel on health information resources to ensure accurate and sound decision making in order to enhance optimal performance.

**Keywords** Information sharing, Job satisfaction, Librarians, Private Universities

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## Introduction

It is common knowledge that during patient consultations, primary care medical doctors need patient-specific information. Accessing information in a timely manner is essential for the clinical decision-making process. Information needs remain unanswered at the time the medical doctors are making clinical decisions, then delayed or uninformed decisions might occur. Consequently, there may be medical errors such as incorrect diagnosis, error in administering treatment or failure to provide prophylactic treatment which impacts the quality and outcome of decisions. Information needs of medical doctors are defined as expressions of missing information that is required to accomplish a specific task, which in this case is managing patient care (Van Osch, Wakker, Van den Hout, & Stiggelbout, 2008).

Medical doctors are generally involved in the activities that are geared towards the provision of health services including diagnosing, maintaining, or treating the patient's physical or mental condition, with the support of other of health workers. The activities that fall within health work in the context of this study include and not limited to administering a drug or other substance, chemotherapy; physical examination of a patient; dental or oral health examinations and treatment; psychological assessment; interventions such as blood and blood product transfusions; invasive procedures, surgical operations, oral health interventions; pathological and radiological investigations or procedures, for example, taking a blood sample or biopsy for analysis; manipulation ; screening undertaken for pathological conditions, for example, breast or bowel cancer; services provided by the allied health disciplines such as the application of splints or heat packs; the transfer of a patient to another facility; and clinical trials or medical research (Sketcher-Baker, 2017).

Hossain and Shin (2012) admit that access to accurate medical information, in various health care facilities, is very necessary for medical doctors to take effective medical decision. Attama and Ezema, (2005) argue that access and use of information are necessary for medical doctors for problem solving and decision making. Other skills required for effective clinical decision making as reported by Nuq (2012) are teamwork, using the gathered evidence to enlist help, support and advice from colleagues and the wider multi-disciplinary team. It is important to liaise with colleagues, listen and be respectful, whilst also being persistent when one needs support so that one can plan as a team when necessary; Sharing learning and getting feedback from colleagues on your decision making; reflection; using feedback from others, and the outcomes of the decisions to reflect on the decisions that were taken in order to enhance practice delivery in the future. It is also important for medical doctors to reflect on their whole decision-making strategies to ensure that they hone their decision-making skills and learn from experience. Health Information accessibility refers to the ease with which medical doctors acquire the right information from available sources to solve the problems encountered during clinical decision making (Kahane, 2011). Accessibility to health information is seen in relation to nearness, ease of use and opportunities for interaction with people and other agencies while proximity and physical distance to a source or channel have been found to be factors influencing use of information. Aguolu and Aguolu (2002) reveal that efforts are being made worldwide to promote access to information. They however lament the attendant features of underdevelopment such as power failure, machine breakdowns, and lack of spare parts and technicians, which intermittently stall the performance of modern gadgets of information storage and transfer in developing countries.

Oltman (2009) in his study provided an early example of the difficulties in articulating information accessibility. He identifies six components of information access, which are identification, availability, price (to the users), cost (to the provider), understanding (awareness), and acceptability. Similarly, Gans, Kralweki, Hammons and Dowd (2005) presented four elements of information accessibility, which are channel, nearness, and cost and literacy level. Yogarajan, Mayo and Pfahringer (2018) opined that an information channel serves as an intermediary, which guides or is supposed to guide an individual to a source. Channels/sources of information such as personal (colleagues and experts), impersonals (newspaper, registers and other print materials) do not exclude the individual and technical communication

media such as telephone, radio, video and internet. [Gans, Kralweki, Hammons and Dowd \(2005\)](#) affirmed that channel of information involves the interchange of facts and thoughts. Information must be transmitted by means of communication process before it can be accessed or used. Information nearness refers to the short distance or interval in information sources, which constitute an important factor for its accessibility. It explains the closeness of relationship between the source and information users ([Davies, 2007](#)). [Gatero \(2010\)](#) also asserts that, information nearness is the distance or intensity and frequency of information interaction between the sources and the users. Thus, distance of information for a given source varies and is infinite ([Choudhry, Fletcher & Soumerai, 2005](#)). When nearness is defined in terms of zero distance within the information and farness in terms of infinite distance outside it, what the users have left is a shift from proximity to access information. Basically, nearness in information is constituted on the basis of users recognising other sources that users can only acknowledge and access other sources of information when it is nearer than other sources. Information however is nearness to anybody in need of it due to technology and worldwide information for all project which aims at eliminating all the barriers to information accessibility. The peculiar condition of health condition may deprive patients' access to some sources of information for the purpose of health condition while health authority needs to establish and meticulously guide some sources of information for security purposes.

Cost of information has been identified as one of the major factors that hindered users' access to information ([Panahi, 2014](#)). The cost of information before a user can obtain access varies depending on the source the information emerges from. For instance, some information sources are confidential and cost implication of accessing such information may influence the user to seek such information further. [Chinnock, Nandi & Clarke \(2005\)](#) also buttressed this assertion that high logistical cost of moving to the location where the information is situated is another crucial factor that determines information accessibility. There are several costs for users in obtaining access to information. These create more obstacles to information accessibility by the patients. The literacy level of information users rely on users' ability to function in a particular context that requires some background knowledge about information. [Jacobs, Amuta and Jeon \(2017\)](#) conclude that literacy level affects the attitudinal and behavioural patterns of individuals. This implies that users with high literacy level can read, understand and act on any information obtained while users with limited literacy skills are likely to have problems in interpreting the contents of information materials. [Watts & Ibegbulam, 2006](#)). [Aspinall, Good, Glassman and Valentino \(2008\)](#) conclude that literacy includes not only the ability to read, but the complexity of information understood, accessed and acted upon. The means of access to information is a powerful procedural measure, which medical doctors needs to establish and meticulously guided for security purposes. This is so because using and retaining only one means of access to information can have a detrimental effect on the quality of information accessed and this quality has a direct bearing on the information to be accessed and likewise on the clinical decision making. The term empowerment connotes or could mean the process of obtaining basic opportunities for marginalized people, either directly by those people, or through the help of non-marginalized concerned people who share their own access to these process ([Afolayan & Oyekunle, 2014](#)). However, experts have identified various obstacles to information access. ([Panahi, 2014](#)) identified four obstacles to information access: economic, social, environmental, and infrastructure. This study will discuss obstacles in the following areas: Social obstacle and non-availability of information. Social obstacle to patients information seeking and use may hinder the accessibility of health information. A successful accessibility of information depends upon the availability of information and level of accessibility. Information should not be based on their level of availability but easy accessibility; it must be physically accessible to those who need them. Accessibility of health information has turned attention to the problems faced by patients. Effective clinical decision making depends on information access infrastructure facilities like information technology, internet facilities, uninterrupted power supply, high literacy level that will facilitate easy access.

## Statement of the problem

Despite the fact that there is a high growth rate in human resources capital in every industry and organization globally, there is scarcity of literature devoted to studying the effect of the influence of access and use of health information resources on clinical decision making among medical doctors in OAUTH. Accessing information in a timely way is essential for the clinical decision-making process. If information needs remain unanswered at the time the medical doctors are making clinical decisions, then delayed or uninformed decisions might occur. Consequently, there may be medical errors such as incorrect diagnosis, error in administering treatment or failure to provide prophylactic treatment, which impacts the quality and outcome of decisions. Clinical decision making is a balance of experience, awareness, knowledge and information gathering, using appropriate assessment tools, colleagues and evidence-based practice to guide. Various literatures studied have been able to address the issues facing organizations within a global perspective, and to deal effectively with increased competitive pressure globalization and demand for efficiency within organization, the various medical industries understudied have come to rely on the strategy of restructuring the medical industry and the influence of access and use of health information resources on clinical decision making among medical doctors can be realistic.

Also, in our today's society, information resources are used by medical doctors to complement their knowledge and clinical experience and to keep themselves up to date. However, the Nigerian medical industry is currently experiencing lingering distress, restructuring strategies deficiency; doctors' low performance and turbulence occasioned by globalization in information and decision making, the efficacy and indispensable role of information accessibility by actively engaged medical doctors for clinical decision-making cannot be over emphasized. The relationship between the accessibility, different sources and the decisions to which such information is applied as well as the relationship that exist between the decisions that medical doctors make and the knowledge that informs them are worth given attention, hence this study.

## Objectives of the study

The objectives of this study are to:

- Identify various health information resources accessible for clinical decision making among medical doctors in OAUTH.
- Determine the level of accessibility of health information resources for clinical decision making among medical doctors in OAUTH.
- Examine the frequency of accessibility of health information resources for clinical decision making among medical doctors in OAUTH.
- investigate the extent of use of various core skills of clinical decision making among medical doctors in OAUTH

## Research questions

The following research questions were raised for the study:

- What are the health information resources accessible for clinical decision making among medical doctors in ObafemiAwolowo University Teaching Hospital (OAUTH), Ile-Ife, Osun State, Nigeria?
- What is the level of accessibility of health information resources for clinical decision making among medical doctors in OAUTH?
- What is the frequency of accessibility to health information resources for clinical decision making among medical doctors in OAUTH?

- What is the extent of use of various core skills of clinical decision making among medical doctors of OAUTH

## Methodology

The study used descriptive research design of correlational type. Descriptive research design is a scientific method which involves observing and describing the behaviour of a subject without moderating it in any way. This method was adopted because it allows the study of a large population in which the perception and feelings of the subjects are easily expressed. The choice of this research design was considered most appropriate for this study because it sought to enhance the understanding of the situation on ground in terms of the influence of the independent on dependent variable studied. The total population was eight hundred and twenty-two (822) medical doctors of various professional status in Obafemi Awolowo University Teaching Hospital (OAUTH), Ile-Ife, Osun State, Nigeria. The categories of medical doctors that were selected for the study were Consultants, Senior Registrars, Registrars, Medical Officers and House Officers. A random sampling technique was used to draw a sample size of 265 using [Krejcie and Morgan's \(1970\)](#) table of sample size under confidence = 95%. Margin of error = 0.05%. Hence, a total number of two hundred and sixty five (265) medical doctors were be used as sample size. Both quantitative and qualitative data were gathered for the study using a set of questionnaires and complemented with a focus group discussion (FGD). Ethical clearance was required in order to gain permission to administer the questionnaire on the medical doctors of the OAUTH. Focus group discussion (FGD) was also held among the two groups of medical doctors with four members in each group totaling eight participants. Out of the 265 sets of questionnaires that were distributed to the respondents in OAUTH, 259 (97.7%) were duly filled and returned. Focus group discussion was done among the doctors. The descriptive method of data analysis, including frequencies, statistical mean and standard deviation were used.

## Data Presentation and Analyses

**Table 1: Various health information resources accessible for clinical decision making among medical doctors in OAUTH**

S/N	Access to health information resources	HA	MA	RA	NA	$\bar{X}$	S.D
1	CT Scan	144 55.6%	97 37.5%	18 6.9%	-	3.49	0.62
2	ECG machine	133 51.4%	102 39.4%	19 7.3%	5 1.9%	3.40	0.71
3	Incubator	97 37.5%	116 44.8%	31 12.0%	15 5.8%	3.15	0.88
4	Orthoscopic	87 33.6%	131 50.6%	33 12.7%	8 3.1%	3.15	0.75
5	Radiograph	123 47.5%	71 27.4%	41 15.8%	24 9.3%	3.13	1.00
6	GSM phones, I pad, I pod	110 42.5%	93 35.9%	32 12.4%	24 9.3%	3.12	0.95
7	Microscope	103 39.8%	99 38.2%	33 12.7%	24 9.3%	3.08	0.94
8	Computer system	98 37.8%	103 39.8%	37 14.3%	21 8.1%	3.07	0.92
9	Telemedicine	98 37.8%	106 40.9%	22 8.5%	33 12.7%	3.04	0.99
10	Electronic BP Gauge	96 37.1%	104 40.2%	30 11.6%	29 11.2%	3.03	0.97
11	Autoclave	79 30.5%	116 44.8%	51 19.7%	13 5.0%	3.01	0.84
12	Internet	91 35.1%	106 40.9%	32 12.4%	30 11.6%	3.00	0.97
13	CD ROM	92 35.5%	104 40.2%	35 13.5%	28 10.8%	3.00	0.96

14	DVD	89 34.4%	104 40.2%	42 16.2%	24 9.3%	3.00	0.94
15	Glucometer	86 33.2%	110 42.5%	39 15.1%	24 9.3%	3.00	0.93
16	Sphygmomanometer	74 28.6%	125 48.3%	44 17.0%	16 6.2%	2.99	0.84
17	Videoconferencing	86 33.2%	106 40.9%	42 16.2%	25 9.7%	2.98	0.94
18	Hemoglobin electrophoresis	86 33.2%	101 39.0%	48 18.5%	24 9.3%	2.96	0.94
19	Video	85 32.8%	103 39.8%	45 17.4%	26 10.0%	2.95	0.95
20	VCD	81 31.3%	106 40.9%	48 18.5%	24 9.3%	2.94	0.93
21	Projectors	81 31.3%	105 40.5%	44 17.0%	29 11.2%	2.92	0.96
22	Teleconferencing	77 29.7%	109 42.1%	45 17.4%	28 10.8%	2.91	0.95
<b>Weighted mean = 3.05</b>							

**KEY: HA=Highly Accessible, MA=Moderately Accessible, RA= Rarely Accessible, NH=Not Accessible**

Table 1 shows that CT Scan ( $\bar{x} = 3.49$ ) ranked highest by the mean score rating and was followed in succession by ECG machine ( $\bar{x} = 3.40$ ), Incubator ( $\bar{x} = 3.15$ ) and Orthoscopic ( $\bar{x} = 3.15$ ). This implies that CT Scan, ECG machine, incubator, Orthoscopic, Radiograph, GSM phones, i pad, i pod, microscope and computer system were the major health information resources accessible for clinical decision making among medical doctors in OAUTH. The reason for this is because these were the items that ranked above the weighted mean of 3.05 set as the benchmark.

**Table 2: The level of accessibility of health information resources for clinical decision making among medical doctors in OAUTH**

S/N	Health Information resources	HA	MA	RA	NA	$\bar{x}$	S.D
1	ECG machine	140 54.1%	99 38.2%	15 5.8%	5 1.9%	3.44	0.69
2	CT Scan	78 30.1%	167 64.5%	8 3.1%	6 2.3%	3.22	0.61
3	GSM phones, I pad, I pod	99 38.2%	108 41.7%	25 9.7%	27 10.4%	3.08	0.95
4	Autoclave	92 35.5%	113 43.6%	33 12.7%	21 8.1%	3.07	0.90
5	Teleconferencing	93 35.9%	103 39.8%	45 17.4%	18 6.9%	3.05	0.90
6	Internet	90 34.7%	111 42.9%	35 13.5%	23 8.9%	3.03	0.92
7	Hemoglobin electrophoresis	98 37.8%	100 38.6%	32 12.4%	29 11.2%	3.03	0.98
8	Sphygmomanometer	74 28.6%	136 52.5%	33 12.7%	16 6.2%	3.03	0.81
9	VCD	90 34.7%	107 41.3%	38 14.7%	24 9.3%	3.02	0.93
10	Microscope	38 14.7%	198 76.4%	11 4.2%	12 4.6%	3.01	0.61
11	DVD	100 38.6%	88 34.0%	42 16.2%	29 11.2%	3.00	1.00
12	Orthoscopic	72 27.8%	136 52.5%	30 11.6%	21 8.1%	3.00	0.85
13	CD ROM	99 38.2%	89 34.4%	37 14.3%	34 13.1%	2.98	1.03
14	Glucometer	80 30.9%	114 44.0%	44 17.0%	21 8.1%	2.98	0.90



15	Centrifuge machine	73 28.2%	134 51.7%	23 8.9%	29 11.2%	2.97	0.91
16	Video	90 34.7%	102 39.4%	30 11.6%	37 14.3%	2.95	1.02
17	Videoconferencing	82 31.7%	105 40.5%	35 13.5%	37 14.3%	2.90	1.01
18	Projectors	82 31.7%	98 37.8%	51 19.7%	28 10.8%	2.90	0.97
19	Computer system	73 28.2%	108 41.7%	52 20.1%	26 10.0%	2.88	0.93
20	Telemedicine	85 32.8%	100 38.6%	33 12.7%	41 15.8%	2.88	1.04
21	Radiograph	67 25.9%	82 31.7%	90 34.7%	20 7.7%	2.76	0.93
22	Electronic BP Gauge	86 33.2%	78 30.1%	30 11.6%	65 25.1%	2.71	1.17
<b>Weighted mean = 3.00</b>							

**KEY: HA=Highly Accessible, MA=Moderately Accessible, RA= Rarely Accessible, NH=Not Accessible**

Table 2 shows that ECG machine ( $\bar{x}=3.44$ ) ranked highest by the mean score rating and was followed in succession by CT Scan ( $\bar{x}=3.22$ ), GSM phone, ipad, ipod ( $\bar{x}=3.08$ ). Radiograph ( $\bar{x}=2.76$ ). This implies that from this, using the weighted mean of 3.00, was that ECG machine, CT scan, GSM phone, ipad, ipod, Autoclave, Teleconferencing, Internet, hemoglobin electrophoresis, Sphygmomanometer, VCD and Microscope were the highly accessible health information resources for clinical decision making among medical doctors in OAUTH..

**Table 3: The frequency of accessibility to health information resources for clinical decision making among medical doctors in OAUTH**

S/N	Health Information resources	Daily	Weekly	Monthly	Occasionally	Never	$\bar{x}$	S.D
1	ECG machine	45 17.4%	154 59.5%	41 15.8%	12 4.6%	7 2.7%	3.84	0.86
2	VCD	94 36.3%	86 33.2%	35 13.5%	26 10.0%	18 6.9%	3.82	1.22
3	Internet	84 32.4%	94 36.3%	41 15.8%	22 8.5%	18 6.9%	3.79	1.19
4	Teleconferencing	103 39.8%	66 25.5%	39 15.1%	31 12.0%	20 7.7%	3.78	1.30
5	Telemedicine	80 30.9%	98 37.8%	36 13.9%	32 12.4%	13 5.0%	3.77	1.16
6	Hemoglobin electrophoresis	83 32.0%	85 32.8%	46 17.8%	27 10.4%	18 6.9%	3.73	1.21
7	GSM phones, I pad, I pod	81 31.3%	82 31.7%	53 20.5%	21 8.1%	22 8.5%	3.69	1.23
8	Projectors	88 34.0%	75 29.0%	41 15.8%	39 15.1%	16 6.2%	3.69	1.25
9	Videoconferencing	77 29.7%	99 38.2%	28 10.8%	34 13.1%	21 8.1%	3.68	1.25
10	Incubator	76 29.3%	90 34.7%	42 16.2%	30 11.6%	21 8.1%	3.66	1.24
11	Video	68 26.3%	101 39.0%	42 16.2%	26 10.0%	22 8.5%	3.64	1.21
12	DVD	73 28.2%	92 35.5%	42 16.2%	33 12.7%	19 7.3%	3.64	1.22
13	Autoclave	61 23.6%	102 39.4%	46 17.8%	35 13.5%	15 5.8%	3.61	1.15
14	CD ROM	83 32.0%	68 26.3%	47 18.1%	44 17.0%	17 6.6%	3.60	1.27
15	Sphygmomanometer	51 19.7%	91 35.1%	72 27.8%	31 12.0%	14 5.4%	3.52	1.10

16	CT Scan	34 13.1%	84 32.4%	119 45.9%	18 6.9%	4 1.5%	3.49	0.86
17	Glucometer	66 25.5%	70 27.0%	68 26.3%	35 13.5%	20 7.7%	3.49	1.22
18	Microscope	57 22.0%	74 28.6%	75 29.0%	36 13.9%	17 6.6%	3.46	1.17
19	Radiograph	74 28.6%	60 23.2%	43 16.6%	73 28.2%	9 3.5%	3.45	1.26
20	Computer system	61 23.6%	85 32.8%	41 15.8%	50 19.3%	22 8.5%	3.44	1.27
21	Orthoscopic	52 20.1%	84 32.4%	70 27.0%	33 12.7%	20 7.7%	3.44	1.17
22	Electronic BP Gauge	72 27.8%	75 29.0%	27 10.4%	29 11.2%	56 21.6%	3.30	1.52
<b>Weighted mean = 3.62</b>								

**Key: D=Daily, W= Weekly, M=Monthly, O=Occasionally, N=Never**

Table 3 shows that ECG machine ( $\bar{x} = 3.84$ ) ranked highest by the mean score rating and was followed in succession by VCD ( $\bar{x} = 3.82$ ), Internet ( $\bar{x} = 3.79$ ) and Teleconferencing ( $\bar{x} = 3.78$ ). This implies that from the above result was that ECG machine, VCD, Internet, Teleconferencing, Telemedicine, Hemoglobin electrophoresis, GSM phones, Ipad, Ipod, Projectors, Videoconferencing, incubator, Video and DVD were the most frequently accessed health information resources for clinical decision making among medical doctors in the study. This study also showed the frequency of accessibility of health information resources for clinical decision making among medical doctors in OAUTH and the reason for this was because these were the items that ranked above the weighted mean of 3.62 set as the benchmark. It was also found out from the FGD that ECG machine, hemoglobin electrophoresis and DVD for clinical decision making was high

**Table 4: The extent of use of various core skills of clinical decision making among medical doctors in OAUTH**

S/N	Core skills of clinical decision making	HA	MA	RA	NA	$\bar{x}$	S.D
1	Pattern recognition from experience	111 42.9%	131 50.6%	5 1.9%	12 4.6%	3.32	0.73
2	Critical thinking without emotion	86 33.2%	142 54.8%	18 6.9%	13 5.0%	3.16	0.76
3	Hypothesis updating	87 33.6%	118 45.6%	40 15.4%	14 5.4%	3.07	0.84
4	Perception based confidence	81 31.3%	117 45.2%	34 13.1%	27 10.4%	2.97	0.93
5	Proactive decision making	72 27.8%	127 49.0%	37 14.3%	23 8.9%	2.96	0.88
6	Overcoming environment task complexity	69 26.6%	129 49.8%	42 16.2%	19 7.3%	2.96	0.85
7	Teamwork using gathered evidence from colleagues	89 34.4%	100 38.6%	38 14.7%	32 12.4%	2.95	0.99
8	Reflection using feedback from others	75 29.0%	121 46.7%	35 13.5%	28 10.8%	2.94	0.93
9	Age and educational level	81 31.3%	106 40.9%	46 17.8%	26 10.0%	2.93	0.94
10	Communication skills from active listening	80 30.9%	106 40.9%	45 17.4%	28 10.8%	2.92	0.95
11	Knowledge sharing among the professionals	82 31.7%	102 39.4%	45 17.4%	30 11.6%	2.91	0.97
12	Time pressure balance	70 27.0%	111 42.9%	56 21.6%	22 8.5%	2.88	0.90
13	Evidence-based approaches	72 27.8%	95 36.7%	68 26.3%	24 9.3%	2.83	0.94
<b>Weighted mean = 2.98</b>							

**KEY: HA=Highly Accessible, MA=Moderately Accessible, RA= Rarely Accessible, NH=Not Accessible**



Table 4 shows that Pattern recognition from experience ( $\bar{x} = 3.32$ ) ranked highest by the mean score rating and was followed in succession by Critical thinking without emotion ( $\bar{x} = 3.16$ ), Hypothesis updating ( $\bar{x} = 3.07$ ) and Perception based confidence ( $\bar{x} = 2.97$ ). This implies that from this using the weighted mean of 3.01 is that CT Scan, ECG machine, VCD, DVD, Autoclave, Glucometer, incubator, Hemoglobin electrophoresis and telemedicine were the most highly utilised health information resources for clinical decision making among medical doctors in OAUTH. Furthermore, the utilisation of various core skills of clinical decision making among medical doctors in OAUTH and also found out from the FGD that the major core skills a clinical professional should possess in making clinical decision include critical thinking without emotions and time pressure balance.

### Summary of the findings

Based on the research questions answered, the hypotheses tested and focus group discussion in this study, the findings revealed that:

1. The CT Scan, ECG machine, Incubator, Orthoscopic, Radiograph, GSM phones, ipad, ipod, Microscope and Computer system were the major health information resources accessible for clinical decision making among medical doctors in the study
2. The level of accessibility to health information resources for clinical decision making among medical doctors in OAUTH was high.
3. The health information resources for clinical decision making are highly accessible.
4. The extent of use of health information resources for clinical decision making among the medical doctors in OAUTH was high and the pattern of use was on a weekly basis.

### Conclusion

The CT Scan, ECG machine, incubator, orthoscopic, radiograph, GSM phones, ipad, ipod, microscope and computer system were the major health information resources accessible for clinical decision making among medical doctors in the study. The level of accessibility to health information resources for clinical decision making among Medical doctors in OAUTH was high. The health information resources for clinical decision making are highly accessible. The extent of use of health information resources for clinical decision making among Medical doctors in OAUTH is high and the pattern of use was on a weekly basis. The frequency of use of health information resources for clinical decision making was high also and the pattern of use was on a weekly basis. The extent of use of various core skills of clinical decision making among found by the study was to a very high extent.

### Recommendations

Based on the findings of this study, the following recommendations were made:

- i. Although the level of accessibility of health information resources for clinical decision making among medical doctors was high effort should be intensified to ensure that health information resources are more accessible to medical doctors
- ii. The extent of use of health information resources for clinical decision making among medical doctors was reportedly high but there was still room for improvement among the medical doctors
- iii. More attention should also be paid to the use of health information resources among the medical doctors as the pattern of usage could increase from weekly basis to either daily or by weekly basis
- iv. Medical doctors should equip themselves through training, seminars, conferences and various capacity building programmes to improve on their core skills for CDM

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