



## Knowledge of ethical obligations amongst dental house officers and final year dental students.

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### Abstract

**Objective:** To assess graduating dental students and house officers' perception as regards to protection and management of patient's clinical information.

**Method:** This descriptive cross-sectional survey among the entire graduating dental students and house officers in a Teaching Hospital in the Southern part of Nigeria was conducted between August and September, 2010. The self-administered questionnaire sought answers to required patient information, patient information management, handling of patient, legal obligation to patient and the communication channel between patient and a third party.

**Result:** The overall response rate was 87.6%. Out of the 85 respondents, 61 (71.8%) and 24 (28.2%) were dental students and house officers respectively. House Officers exhibited significantly better knowledge of identifiable patient information, confidentiality of patient information, taking custody of hospital care notes and mode of release of detailed information concerning child care to non-attending father than the dental students ( $P < 0.05$ ). House officers also exhibited better, though, not-significant knowledge in release of information about HIV- infected husband to the spouse than dental students. Dental students exhibited better knowledge in data storage area, release of patient information to colleagues and police than the House officers.

**Conclusion:** There was overall poor knowledge on the protection of patient data and relevant clinical information. However, experience in dental practice appeared to have resulted in the differences noted in the protection and management of patient's clinical information among graduating dental students and house officers.

**Key words:** Ethics, patient information, confidentiality, consent

### Introduction

The relationship between dentist and patient has been of interest since ancient times, principally concerning the moral obligation of dentist in the treatment and prevention of oral disease<sup>(1)</sup>. Patient information which is anything that is used to identify a patient whether directly or indirectly and is bound by legal and ethical obligations is of confidentiality<sup>(2)</sup>. The adequate management of patient information is very vital in establishing confidence by the patient in his or her dentist. All members of the dental team are obliged to maintain patient confidentiality and information offered in confidence. This information should not be disclosed or used in any way that might identify or expose a patient without his or her explicit consent<sup>(3)</sup>. Professional associations such as the American Dental Association, the British Dental Association, Canadian Dental Association and the Nigeria Medical and Dental Council have standard ethics and code of professional conduct which mandate dental professionals on their responsibility to their patient regarding information confidentiality<sup>(4-6)</sup>. It is important to know how much of

such knowledge of protection of patients information dental professionals have and how much of it is put into practice. Basically, the issue of ethics has not been given much attention in practice in many places. The review of the literature has showed paucity of information on this topical issue in our environment. The objective of this study was to unravel this ethical dilemma regarding knowledge and practice of dental house officers and final year dental students concerning ethics and in dental patient care.

### Materials and method

This descriptive cross-sectional survey of the entire graduating dental students and house officers who treat patient in University of Benin Teaching Hospital, Benin City, Nigeria was conducted between August and September, 2010. The tool of data collection was a 19-item self-administered questionnaire grouped into 2 sections A and B of 6 and 13 items respectively.

Section A was made up of 6 questions which assessed demographic variables like age, sex, marital status, ethnic group, religion and professional status.



Section B was made up of 13 multiple choice questions and answers developed from the America Dental Association Ethics and Code of Professional Conducts, Nigeria Medical and Dental Council Code of Medical Ethics, General Dental Council of the United Kingdom Standard Guidance 2005<sup>(4-7)</sup>. The question in this section assessed the right of the patient concerning his or her clinical information, appropriate place for information storage and preservation, voluntary patient information, access to patient data for research, attendance of patient at the clinic, and information management between patient and family members.

These questionnaires were hand delivered to the dental students and house officers during a regular class session and interdepartmental seminar respectively. Students and house officers absent from the class session and interdepartmental seminar respectively were excluded from the study.

Participants were scored correct for each question answered correctly and scored incorrect for question answered wrongly. Question answered partially correct was considered incorrect. Each question was analysed independently and the percentage correct and incorrect was assessed using simple descriptive statistics. Informed consent was obtained from participants before the commencement of the survey. Data analysis was done using Statistical Package for Social Science (SPSS) Version 15.0 P<0.05 was considered significant using chi square statistics. The questionnaire and the correct answers to the questions are attached.

**PATIENT DATA PROTECTION QUESTIONNAIRE**

**BIODATA**

1. Age (years) \_\_\_\_\_
2. Gender: male [ ], female [ ]
3. Marital status: single [ ] married [ ]
4. Religion: Christianity [ ], Islam [ ], others (specify) \_\_\_\_\_
5. Ethnic group: Bini [ ], Esan [ ], Estako [ ], Igarra [ ], Yoruba [ ], Igbo [ ], Urhobo [ ], Hausa [ ], Ijaw [ ] Others [Specify]-----
6. Status Dental student [ ], House officers (interns) [ ]

**SECTION B**

1. Which of the following is patient identifiable information  
Please tick yes or no for each option

	Yes	No
<b>Name</b>	[*]	[ ]
<b>Address</b>	[*]	[ ]
<b>Age</b>	[*]	[ ]
<b>Marital status</b>	[ ]	[*]
<b>Occupation</b>	[ ]	[*]
<b>NHIS No</b>	[*]	[ ]
<b>Next of kin</b>	[ ]	[*]
2. What guideline/regulations are you aware of concerning data protection/ information of patient? Please tick as many option as apply to you. Human right acts [\*] Medical and Dental Council of Nigeria code of ethics [\*] International code of medical ethics[\*]

3. Keeping confidential patient information secure is: please circle/ tick the incorrect option  
A legal obligation [ ] An ethical professional obligation [ ] Medical and Dental Council of Nigeria Contractual Obligation [ ] Optional[\*]
4. Hospital care notes should be kept in custody of the hospital. True [\*] False [ ] Do not know [ ]
5. Where do you think data should be best stored? Clinicians personal computer [ ] Central hospital data bank (records department) [\*] Departmental computer [ ]
6. If you are approached by the police for information regarding a patient you have seen, can you provide it? No, never [ ] yes, any information required in a criminal investigation must be provided [ ] Yes, but they must confirm that it is to prevent or detect crime, or to apprehend or prosecute offenders. The release of information is at your discretion except if the police produce a court order [\*] Only with the patient permission [ ]
7. You are opportune to have treated or had access to the record of an 18 yrs old patient and the mother called to find out if her son attended his appointment, what will you do? Give her full information regarding his attendance [ ] Declare, explaining that the information is confidential and can only be provided if authorized by her son [\*] Send her the details of his attendance in writing [ ]
8. If patient information/research data is stored in your laptop and all patient data is anonymised, will the data protection act still apply to you. Yes, without any exemptions [ ] Yes, but with certain exemptions [\*] No [\*]
9. When calling patients to the surgery, you should ideally
  - a. Call the patient over the loud speaker using their full names and which room they should come to.
  - b. Ask the receptionist to send the patient to the correct room
  - c. \*Collect the patient and escort them to the surgery
  - d. Ring them on their mobile phone and tell them to come to the surgery
  - e. Patient leaving the consulting clinic should call the next patient
10. Should a wife be informed that her husband is HIV positive when she does not know and the husband specifically demands she is not told? Yes, she should be told [ ] No she should not be told [ ] Yes, in exceptional circumstances in the interest of public well being[\*]
11. A 12-yr-old child had an appointment with you and the father could not attend. He calls to find out what happened at the appointment. Do you
  - a. Explain the details of the appointment to him
  - b. E-mail him with the information
  - c. \* Tell him you cannot discuss this over the phone, but would be happy to give him details if he comes to the clinic
  - d. Write to him with the information
  - e. Explain that you cannot tell anything without the patients permission
12. If a colleague of yours requests for details of a patient you have seen earlier on, what do you do? Tell him the information over the phone [ ] Discuss with him one on one[\*] Tell him you need to obtain consent from the patient before you can tell him[\*]



13. A patient asks to have a copy of their notes, do you  
 Photocopy the notes and hand it over to them by post [ ]  
 Give them the original notes [ ] Tell them they can view  
 the note but not have a copy as they are the property of  
 the hospital [\*]

**NOTE:** The correct response is/are marked with asterisks.

**Table 1: Demographic Characteristics of the Respondents**

Characteristics	Frequency (N)	Percent (%)
<b>Age (years)</b>		
22-25	28	32.9
26-29	37	43.5
>29	20	23.5
<b>Gender</b>		
Male	55	64.7
Female	30	35.3
<b>Marital status</b>		
Single	79	92.9
Married	6	7.1
<b>Religion</b>		
Christianity	82	96.5
Islam	2	2.4
Free thinker	1	1.2
<b>Professional Status</b>		
Dental student	61	71.8
House officer	24	28.2
<b>Total</b>	<b>85</b>	<b>100.0</b>

**Results**

A total of 85 respondents completed and returned the questionnaire giving an overall response rate of 87.6%. Out of the 85 respondents, 61 (71.8%) and 24 (28.2%) were dental students and house officers respectively. Mean age of respondent was 24 years with male/female ratio of 1.8:1 with male constituting 64.7% and female 35.5% (**Table 1**).

The level of knowledge of ethical obligation with respect to data protection and confidentiality to patient by both 600 level students and house officers was generally poor. House officers exhibited a better knowledge in handling of hospital care note. Dental students exhibited better knowledge in storage of patient data (question 4, 72%), release of patient information to the police (question 5, 52.5%) and parents of adult children (67.2%). Patient identifiable information proved to be the most wrongly answered question as the performance in this study was 17.7%, with the house officer having better knowledge (**Table 2**).

**Discussion**

The code of conduct guiding dental practitioners in both moral, civil and criminal behaviour has been covered by many professional councils and associations<sup>(1,2,4,6)</sup>. This survey was carried out amongst house officers and final

**Table 2: Knowledge and Practice of the Respondents in Relation to Ethical issues**

Question	Response	Status		Total n(%)	P-value
		Student n(%)	House Officer n(%)		
Q1:	Correct	7(11.5)	8(33.3)	15(17.7)	0.017*
	Incorrect	54(80.5)	16(66.7)	70(82.3)	
Q2:	Correct	14(23.0)	10(41.7)	24(28.2)	0.084
	Incorrect	47(77.0)	14(58.3)	61(71.8)	
Q3:	Correct	7(12.9)	9(37.5)	16(18.8)	0.006*
	Incorrect	54(87.1)	15(62.5)	69(81.2)	
Q4:	Correct	44(72.0)	24(100.0)	68(85.0)	0.004*
	Incorrect	17(28.0)	0(0.0)	17(15.0)	
Q5:	Correct	32(52.5)	11(45.8)	43(50.6)	0.582
	Incorrect	29(47.5)	13(54.2)	42(49.4)	
Q6:	Correct	41(67.2)	11(45.8)	52(61.2)	0.069
	Incorrect	20(32.8)	13(54.2)	33(38.8)	
Q7:	Correct	49(80.3)	18(75.0)	67(78.8)	0.588
	Incorrect	12(19.7)	6(25.0)	18(21.2)	
Q8:	Correct	13(21.3)	5(20.8)	18(21.2)	0.961
	Incorrect	48(78.7)	19(79.2)	67(79.8)	
Q9:	Correct	21(34.4)	7(29.2)	28(32.9)	0.642
	Incorrect	40(65.6)	17(70.8)	61(67.1)	
Q10:	Correct	15(24.6)	10(41.7)	25(29.4)	0.120
	Incorrect	46(75.4)	14(58.3)	60(70.6)	
Q11:	Correct	16(26.2)	13(54.2)	29(34.1)	0.014
	Incorrect	45(73.8)	11(45.8)	56(65.9)	
Q12:	Correct	31(50.8)	13(54.2)	44(51.8)	0.871
	Incorrect	30(49.2)	11(45.8)	41(48.2)	
Q13:	Correct	39(63.9)	21(87.5)	60(70.6)	<b>0.032*</b>
	Incorrect	22(36.1)	3(12.5)	25(29.4)	
<b>Total</b>		<b>61</b>	<b>24</b>	<b>85</b>	



year students who are beginning to develop the appropriate knowledge and practical skills in the handling of patients holistically. It became quite imperative to ascertain how much of the basic knowledge and practical approach they possess in the protection and management of patient's clinical information especially in the face of non-existing known protocol in Nigeria.

However, the overall knowledge and practice of information handling and data protection was poor with an overall correct response rate at 46.27%. This is at variance with a study done in United Kingdom with an overall correct response rate of 73%<sup>(8)</sup>. Majority of the questions were answered poorly with many falling below 50%.

Only a handful of the students and house officers were able to identify the correct patient identifiable information with an overall correct response rate of 17.7% even when this information are usually found in the patients case notes. This could be attributed to lack of attention paid by these professional and students to patient identifiable information in patient's case notes, especially when this is done routinely. Poor supervision by senior clinicians and the belief that they ought to know these basic facts could be added for the poor knowledge.

Keeping confidential patient information secure which is a legal/ethical professional obligation was wrongly answered as being an optional responsibility of the dental practitioner. This is totally at variance with a similar study done in Brazil<sup>(3)</sup>. Only 24.6% and 41.67% of the students and house officers respectively answered correctly about revealing status of their patient to spouses of HIV positive client in the interest of public well-being. Rensen<sup>(9)</sup>, and Maccon<sup>(10)</sup>, reported that in some situations, such disclosure of the existence of infectious contagious disease or information considered essential to continue the patient's dental treatment, cannot be considered breach of confidentiality. The disclosure of these facts is a way of avoiding that health professionals are exposed to numerous problems. Sirinskiene, et al. <sup>(11)</sup> explored the limits of confidentiality in the context of HIV - positive patients. They assume that, in this case, confidentiality may be breached to inform the patient's spouse, care giver or health professional in charge. Nevertheless, before being shared with patient, the strictly confidential information has to be analysed taking into consideration the patient's autonomy, psychological and mental state.

A total of 50.5% and 54.17% of the students and house officers respectively answered correctly the mode of sharing information with colleague one on one. This affirms the study done by Castledine<sup>(12)</sup>. Although it is of great importance to keep professional confidentiality and protects patient data<sup>(13, 14)</sup>, it is observed that the dental schools in Nigeria though have ethics and bioethics as part of the undergraduate curriculum, similar to what obtains in developed countries like America and the UK<sup>(4, 7)</sup>. There is still the challenge of inadequate emphasis being placed on the subject and shortage of man power to deliver the subject. This incoherence reveals that the future professionals are unprepared with respect to ethics and legislation which forms the background knowledge of the complex professional, patient/family relationships. A recent study shows that some health professionals, doctors and nurses also presented a poor understanding of ethical and legal principles and concepts of professional confidentiality<sup>(15)</sup>.

Dental ethics should be given priority in dental education. This can be easily achieved by introducing the concept early in the undergraduate curriculum, paying more emphasis on this subject and recruiting adequate man power to help deliver the subject. This will help to consolidate the knowledge of the future dentist and eventually influence their relationship with patients.

## Conclusion

In this study there was an overall poor knowledge on the protection of patient data and relevant clinical information. However, experience on the part of the dental house officers appeared to have resulted in the differences in the management and protection of patient data and clinical information when compared with the final year dental students. This poor knowledge generally portends danger for the dentist and the patient. This study has exposed the deficiency of the students in the subject of ethics. The need to pay more emphasis on this subject just like the other clinical subjects cannot be overemphasised. Dentists should be more conversant with ethics to avoid unwarranted litigations from their patients. Guidelines should be released in hospitals to strengthen the ethical obligations to patients.

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