Awareness and practice of telemedicine among staff of the Federal Medical Centre at Birnin Kebbi, Nigeria

In 2008, the Federal Ministry of Health (FMOH) equipped selected health facilities in Nigeria with facilities for telemedicine in order to improve service delivery. We have conducted a study at one of these facilities, the Federal Medical Centre (FMC) in Birnin Kebbi. Birnin Kebbi is an ancient town in north-western Nigeria and the capital of Kebbi State. The FMC is the only tertiary institution in the state and it was established in the year 2000 to cater for a population of over 3 million.[1] At the time of the study, the FMC had a staff of 400, including 21 doctors, 120 nurses, 259 administrative and supporting staff. The centre had 300 beds. The purpose of the study was to determine the level of awareness, and practice of telemedicine among the staff of the FMC.

The staff were all involved in the management of patients and gave their consent to participate in the study. We excluded staff who had been employed for less than a year because the telemedicine facility had only been introduced into the hospital one year previously. There have been no previous studies of the level of awareness and knowledge of telemedicine in north western Nigeria to the best of our knowledge. However, there have been studies in Europe, the US and in other parts of Nigeria.[2–4]

Our study was conducted in November 2009. Structured questionnaires were given to each member of staff who met the inclusion criteria. The questionnaire asked for the participants' demographic data, including age, gender and professional status. It also asked about their awareness, knowledge and practice of telemedicine at the health facility. The data analysis was carried out using a standard package (SPSS 16.0, SPSS Inc., Illinois, USA). The study was approved by the appropriate ethics committee.

One hundred questionnaires were issued and 94 staff (94%) returned the questionnaire for analysis. There were 61 males (65%) and 33 females (35%), with a mean age of 36 years (range 30–55). The majority of respondents (80, 85%) understood the meaning of telemedicine while 14 (15%) did not. Fifty-three (58%) were not aware of the availability of telemedicine at the FMC, while 38 (42%) were aware of it. Of those who were aware, 82% had never used it, 15% occasionally used it and only 3% always used it when appropriate. A number of reasons were given for the lack of use of telemedicine at the health facility (Table 1).

Of 82 respondents 18%, 16%, 59% and 7% said they had always, frequently, occasionally and never, respectively, required a second opinion in the management of patients in the two months preceding the study. However, 90 (96%) thought that telemedicine could assist in patient management while 4 (4%) did not know. Only 7 (7%) had received training in telemedicine, while 87 (93%) had never had training. However, 91 (97%) were willing to be trained in telemedicine if provided, and only 3 (3%) were not.

Table 1. Health-care providers' reasons for not using telemedicine

	No	%
Not aware of the availability of telemedicine	49	92
Don't know how to use telemedicine	3	6
See no reason to use telemedicine	1	2
Total	*53*	*100*

Sixty-one respondents (65%) had an email address, and 33 (35%) did not. Sixty-five (69%) said they had previously browsed on the Internet and 29 (31%) said that they never did. Of 65 respondents that had previously browsed on the Internet, 14 (15%) browsed always, 18 (19%) frequently and 33 (35%) occasionally. Of 29 who never browsed on the Internet, the majority (28, 97%) said they would like to be trained how to browse on the Internet and only 1 (3%) did not.

The preponderance of males in our study was similar to the study of Abodunrin *et al.*[2] in the Lautech Teaching Hospital, Osogbo, Nigeria but different from that of Isabalija *et al.*[5] in Uganda, who reported more females. Generally, there are more males working in public service in Nigeria, perhaps because of socio-cultural factors against women working in public places, especially in the northern part of the country. The majority of participants were aged 30–40 years, which is similar to other studies[4,5]. This was unexpected, as our study was among the working age group. In our study, the majority (85%) understood the meaning of telemedicine, which is similar to earlier studies[3–6] but different from that of Isabalija *et al.*[5] where most of the respondents were not knowledgeable about telemedicine. We also found that most of the respondents agreed that telemedicine would help in the management of patients and this is similar to earlier studies.[3–7] In our study only 7% had ever received training in telemedicine, which may have contributed to the high number of the staff not using the hospital telemedicine facility.

We conclude that even though the majority of the staff understood the meaning of telemedicine, few were aware of its availability at the hospital. Therefore, there is a need to improve awareness of health-care providers about telemedicine in our hospital and provide training and information about its benefits.

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