

Computer usage by paediatricians in Sri Lanka

Manouri P Senanayake¹

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Introduction

Information technology (IT) is fast becoming an essential tool in the delivery of health care^{1,2}. Clinicians need IT to improve medical practice, to keep up with new advances, maintain electronic medical records, in research and for communication^{3,4,5}. "Paperless" examinations are being attempted in medical education and consultations between patients and doctors placed on opposite sides of the world are being undertaken using internet and telemedicine. "Cyberspace" hospitals and "virtual medical schools" looming on the horizon further highlight the need for computer usage by doctors.

Objectives

To assess among more recently qualified paediatricians

- Their access to a personal computer and internet
- Their reasons for using computers
- The prevalence of using electronic patient record systems
- Their methods of keeping abreast of current advances in paediatrics.

Method

An observational descriptive study was carried out in 2004 among 69 randomly selected paediatricians of state hospitals. The study population consisted of 22 consultant paediatricians, who had been board certified within the past 15 years and were working in provincial hospitals, and 47 post graduate trainees

who were registrars or senior registrars in teaching hospitals. Senior paediatricians and those in academic posts were excluded. A self-administered questionnaire was used to gather information, which included a self assessment of computer literacy.

Results

Overall response rate was 87% (60/69) with 95% consultants and 83% trainees responding. Access to a computer at work was available for 38% of consultants and 21% trainees and 85% of those responding in both groups had a computer at home. Seven (approximately 10%) did not have a computer at work or at home. Access to internet was available to 86% of consultants and 69% of post-graduate trainees. Computer use in relation to professional work during the past six months was to access the internet, for preparation of slide presentations and word processing (Table 1).

Electronic data bases were used for maintaining patient records by 14% of consultants. Methods of keeping up-to-date with current advances in paediatrics showed that printed journals and attendance at conferences or meetings were preferred over electronic publications. Only about two thirds of paediatricians used internet for continuing medical education. Only 10% of consultants and 8% of postgraduate trainees assessed themselves as having 'good' computer literacy; 52% and 51% claimed 'satisfactory' computer literacy and 38% and 41% reported 'poor' computer literacy respectively. The majority (62% consultants and 82 % postgraduates) had never attended a course in IT.

¹*Professor in Paediatrics, Faculty of Medicine, University of Colombo.*

Table 1

Computer access and usage among hospital based paediatricians

	<i>Consultants n=21 (%)</i>	<i>Registrars/Senior Registrars n=39 (%)</i>
<u>Access to computer and internet</u>		
Computer at work	8 (38.1)	8 (20.5)
Computer at home	18 (85.7)	33 (84.6)
No computer	3 (14.3)	4 (10.3)
Access to internet	18 (85.7)	27 (69.2)
<u>Use of computer in last 6 months</u>		
Internet	16 (76.2)	26 (66.7)
Slide preparation	15 (71.4)	19 (48.7)
Word processing	10 (47.6)	18 (46.2)
Multimedia	9 (42.9)	21 (53.8)
Database	7 (33.3)	5 (12.8)
Spread sheet	5 (23.8)	4 (10.3)
Statistical packages	4 (19.0)	4 (10.3)
Leisure	9 (42.9)	16 (41.0)
<u>Keeping up-to-date with current advances</u>		
Major textbooks	14 (66.7)	35 (89.7)
Printed journals	19 (90.5)	36 (92.3)
Conferences, Symposia, Meetings	18 (85.7)	25 (64.1)
Electronic databases (Medline, Cochrane)	9 (42.9)	11 (28.2)
Internet	14 (66.7)	24 (61.5)
	3 (14.3)	3 (7.7)
<u>Use of electronic database for patient records</u>		
<u>Research projects engaged in during the past 12 months</u>		
None	9 (42.9)	21 (53.8)
1-3	11 (52.4)	17 (43.6)
> 3	1 (4.7)	1 (2.6)
<u>Self assessment of computer literacy</u>		
Good	2 (9.5)	3 (7.7)
Satisfactory	11 (52.4)	20 (51.3)
Poor	8 (38.1)	16 (41.0)
	8 (38.1)	7 (17.9)
<u>Attendance at an IT course</u>		

Recommendations

This survey was carried out among more recently qualified paediatricians and those still in training. We found that approximately 40% rated themselves as “poor” in computer skills, and electronic publications and medical record systems were poorly utilized in professional work. Lack of computers in the work place compounded this situation. Most paediatricians had computer access only at home but printed journals were preferred over electronic publications.

The postgraduate training programmes lay emphasis on computer assisted learning and research skills. These two learning objectives are focused on as important even in undergraduate curricula. However 41% of postgraduates assessed themselves as having “poor” computer skills and we recommend that urgent steps are taken to correct this situation.

In most hospital libraries in Sri Lanka the availability of print journals is limited by financial constraints. We therefore recommend providing internet access to all hospital paediatricians when providing resources because the vast amount of electronic information that is freely available is currently not being utilized. We found in this survey the non-availability of a valuable educational tool that if provided could improve the quality of paediatric services in this country as well as contribute significantly to the personal advancement of paediatricians.

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