Identification of sources from which doctors in the private sector obtain information on HIV and AIDS

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Abstract

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Background: Doctors need to constantly update their knowledge and obtain information in order to practise high-quality medicine. Antiretroviral drugs have been available only since around 1996, therefore many of the doctors who were trained prior to 1996 would not have received any formal training in the management of HIV and AIDS patients. Where doctors source their general medical knowledge has been established, but little is known about where doctors source information on HIV/AIDS. This study investigated where private sector doctors from the eThekwini Metro obtain information on HIV and AIDS for patient management.

Methods: A descriptive cross-sectional study among 133 private general practitioners (GPs) and 33 specialist doctors in the eThekwini Metro of KwaZulu-Natal, South Africa, was conducted with the use of questionnaires. The questionnaires were analysed using SPSS version 15. A p value of < 0.05 was considered statistically significant.

Results: The majority of the doctors (92.4%) obtained information on HIV and AIDS from journals. Continuing Medical Education (CME), textbooks, pharmaceutical representatives, workshops, colleagues and conferences were identified as other sources of information, while only 35.7% of doctors were found to use the internet for information. GPs and specialists differed significantly with regard to their reliance on colleagues (52.9% versus 72.7%; $p < 0.05$) and conferences (48.6% versus 78.8%; $p < 0.05$) as sources of HIV information. More than 90% of doctors reported that CME courses contributed to better management of HIV and AIDS patients.

Conclusion: Private sector doctors in the eThekwini Metro obtain information on HIV from reliable sources in order to have up-to-date knowledge on the management of HIV-infected patients.

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Introduction

Since medical knowledge increases fourfold during a professional lifetime, doctors need to constantly update their knowledge and obtain information to help them with particular patients if they want to practise high-quality medicine.[1] The central responsibility of doctors is to meet the needs of patients by drawing on the evidence base of scientific and clinical knowledge accumulated by medical and scientific research over 5 000 years.[1] Medicine is regarded as a knowledge-based/evidence-based profession, with experienced doctors using about two million items of information to manage their patients. Most of the information that doctors use when seeing patients is embedded in what has been called "a constantly expanding and reinterpreted database".[1] This information is obtained from many sources, including print media, colleagues, meetings, lectures, the internet, and others.[2] Where doctors source their general medical knowledge has already been well established, but little is known about where doctors source information on HIV/AIDS.

In early 2008, 27 years after the recognition of AIDS, approximately 33 million people were estimated to be living with HIV/AIDS and more than 35 million had died since the beginning of the epidemic.[3]

Two-thirds (67%) of people infected with HIV live in sub-Saharan Africa, where three-quarters (75%) of all AIDS deaths in 2007 occurred.[4] Antiretroviral drugs (ARVs), which significantly delay the progression of HIV to AIDS and allow people living with HIV to live relatively normal, healthy lives, have been available in wealthier parts of the world only since around 1996. As a result, many of the doctors who were trained prior to 1996 would not have received any formal training in the management of HIV and AIDS patients. They have to rely on continuing education, workshops, journals, advice from colleagues, etcetera, for assistance with the management of HIV and AIDS patients. Studies in Vietnam have shown that younger physicians tended to be better informed,[5] and were more up to date regarding specialist thinking on HIV than older associates.[6] For doctors in developing countries of Africa and Asia, finding the latest information on HIV and

AIDS is difficult because of sluggish and unreliable internet connections.[7]

The aim of this study was to investigate where private sector doctors from the eThekwini Metro of KwaZulu-Natal, South Africa, obtain information on HIV and AIDS for patient management. With digital and electronic dissemination of knowledge expanding, it was important to explore how the gap between the knowledge base established during the initial training of doctors and later clinical practice could be bridged. The characteristics of the practice of these doctors were also recorded.

Method

Study design, study area and sample population

This descriptive, cross-sectional study was conducted among private general practitioners (GPs) and specialists in KwaZulu-Natal, South Africa. This province was chosen because it has the highest prevalence of HIV, as indicated by the data of attendees at antenatal clinics (39.1% in 2006, with the national figure being 29.1%).[8] The study focused on the eThekwini Metro of KwaZulu-Natal, which has a population of 3 090 126. Four ethnic groups reside in the eThekwini Metro, viz black African (68.3%), Indian/Asian (19.9%), white (9.0%) and coloured (2.8%). One-third (31.43%) of the population falls in the age group between 15 and 29 years, while only 6.29% of the population is in the age group 60 to 84 years. The majority of the people speak Zulu (63.04%), followed by English (29.96%), Xhosa (3.43%), Afrikaans (1.44%) and other languages (2.13%).[9]

Study sample

Lists of private health care sector doctors who were either GPs or specialists working in the eThekwini Metro were obtained from the Medpages Directory; the KwaZulu-Natal Managed Care Coalition (KZNMCC), which is a private doctors' grouping: the private doctors' guilds; the Lancet Clinic Courier database; and the Southern African HIV Clinicians Society. The various directories were consulted in order to obtain a representative sample. A comprehensive list of 1 255 GPs and specialists practising in the eThekwini Metro was obtained. The study was conducted in different phases. In phase 1, doctors who managed HIV and AIDS patients (n = 235)[10] were identified. Of these, 190 agreed to participate in phase 2 of the study. Doctors were contacted by telephone to ensure their availability and consent. Trained field workers delivered questionnaires to the doctors' rooms and these were collected when the doctors had completed them. Some of the questionnaires were faxed to doctors, who also returned them by fax. The questionnaires were coded so that no names or contact details of participating doctors were recorded. The structured questionnaires requested the demographic profile, practice characteristics and the source of HIV and AIDS information of private sector doctors. A list of options for the different sources of HIV and AIDS information was provided, plus an 'other' option that had to be specified. For each option, respondents were asked to provide further details. A list of journal options was provided, which also included an 'other' category requiring the source to be specified. The data were captured and analysed using SPSS version 15. A p value of < 0.05 was considered statistically significant. Chi-square testing was used for categorical data and the Fischer Exact test for small numbers. The Independent Sample T test was used for continuous data, to test associations.

Ethical approval for the study was obtained from the Ethics Committee of the Nelson R Mandela School of Medicine, University of KwaZulu-Natal (Ethics Number H138/03).

Results

The results provide a comparative description of the demographic profile, practice characteristics, and sources of information on HIV and AIDS of both GPs and specialists working in the eThekwini Metro of KwaZulu-Natal.

Of the 190 doctors who agreed to participate in the study, 171 (90%) completed and returned the questionnaire.

Demographic profile of GPs and specialists

The majority of the doctors (78.9%) were male, with a small number of female GPs and specialists. Most of the doctors were in the 41 to 50 age range (40.3%), irrespective of sex (Table I).

Table I: Demographic profile of GPs and specialists working in the eThekwini Metro

		Specialist			GP		
		Male	Female	Total	Male	Female	Total
Age group	30–40	3	1	4	28	6	34
	41–50	17	1	18	43	8	51
	51–60	5	2	7	22	4	26
	61–70	2	1	3	12	0	12
	> 70	1	0	1	2	0	2
Total		28	5	33	107	18	125

Missing data = 13 (n = 171)

Practice characteristics of private sector doctors

Private sector doctors do not interact with organisations and institutions involved with HIV/AIDS to any great extent, and only 39.8% of the respondents indicated that they were members of the SA HIV Clinicians Society.

Most of the respondent specialists practised in the central area, while the majority of the GP respondents were practising in the south. No respondent specialist practised in the west of the Metro (Table II).

The majority of the private sector doctors have been working in the eThekwini Metro for 11 to 20 years (Table III).

The majority of the GPs (33.3%) had between 1 and 20 patients in their care annually, with 28.1% of the specialists having cared for between 1 and 20 patients in the past year, and an equal percentage of over 200 patients in the same

period. A smaller percentage (21.5%) of the GPs had cared for more than 200 patients in the past year (Figure 1).

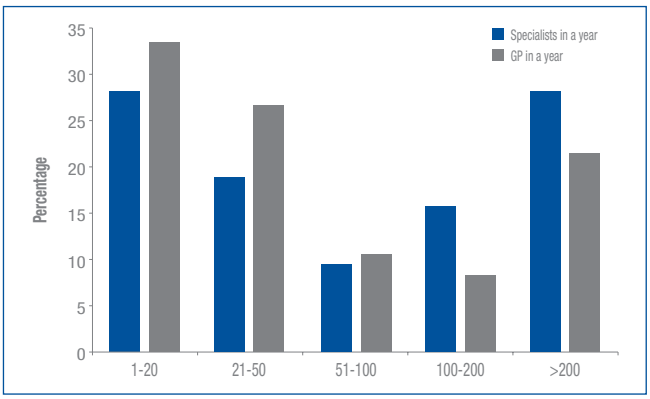
Table II: Comparison of geographic areas of practice of private sector GPs and specialists in the eThekwini Metro of KwaZulu-Natal

	Number (%) GP	Number (%) specialist	Total
Area of practice			
Central	37 (27.4%)	19 (57.6%)	56
South	50 (37.0%)	2 (6.1%)	52
North	24 (17.8%)	8 (24.2%)	32
West	10 (7.4%)	0	10
Other (working in more than 1 area)	14 (10.4%)	4 (12.1%)	18
Total	135	33	168

Table III: Comparison of ages and years of practice of private sector GPs and specialists in the Metro

Age range (years)	Years in practice					
	1–10 yrs	11–20 yrs	21–30 yrs	31–40 yrs	> 40 yrs	Total
GPs						
30–40 yrs	25	8				33
41–50	7	31	14			52
51–60		10	11	4		25
61–70		1	2	9		12
> 70					2	2
Specialists						
30–40	1	2				3
41–50	2	9	6			17
51–60		1	6			7
61–70				3		3
> 70					1	1
Total	35	62	39	16	3	155

Figure 1: Comparison of private sector GPs and specialists working in the Metro and the number of patients managed annually



Sources of HIV and AIDS information for doctors

Doctors obtained their information on HIV and AIDS from various sources, with the majority using journals, but many doctors obtained information from Continuing Medical Education (CME) (Table IV). Textbooks, pharmaceutical representatives, workshops, colleagues and conferences were identified as other sources of information. Only 35.7% of doctors consulted the internet to obtain information on HIV and AIDS. South African journals provided the most popular sources of information, with most doctors obtaining their information from the South African Medical Journal (SAMJ). Just over half of the respondents read the South African Journal of HIV Medicine and around one-fifth obtained information from the Lancet. Few doctors in the private health care sector read journals specialising in HIV and AIDS.

The number of years in practice did not influence the choice of journal by the doctors, but a comparison of the doctors (GPs and specialists) in terms of the journals sourced found significant differences in their use of journals such as the Lancet, British Medical Journal (BMJ), AIDS Journal and the New England Journal (Table V).

Table IV: Private sector doctors' sources of information on HIV and AIDS

	%	n
Journals (total)	92.4%	171
Names of journals		
South African Medical Journal (SAMJ)	85.4%	171
South African Journal of HIV Medicine	53.8%	171
Lancet	21.1%	171
British Medical Journal (BMJ)	18.2%	170
AIDS Care Journal	15.2%	171
AIDS Journal	13.5%	170
New England Journal	10.6%	170
JAIDS	9.9%	171
Clinical Infectious Diseases	7.1%	170
AIDS Patient Care	5.9%	170
JAMA	2.4%	170
Other journals	17.5%	170
Modern Medicine	4.1%	171
JSADA	0.6%	171
Journal Clinica	0.6%	171
SA Family Practice	0.6%	171
JNL of Lang & Stol	0.6%	171
CME courses	77.8%	171
Textbooks	63.7%	171
Pharmaceutical representatives	62.6%	171
Workshops	57.9%	171
Fellow colleagues	56.7%	171
Conferences	54.4%	171
Internet	35.7%	171
Other	3.5%	171

GPs and specialists also differed significantly with regard to obtaining information from colleagues (52.9% versus 72.7%; $p < 0.05$) and their use of conferences (48.6% versus 78.8%; $p < 0.05$) as sources of information on HIV. Similar results, of over 90% and 75% respectively, were found, however, for the use of journals and CME courses by the two groups (Table V).

More than 90% of doctors reported that CME courses contributed to better management of HIV and AIDS patients, followed by workshops (82.5%). Fewer (71.9%) doctors felt that they learnt as much from conferences.

Table V: Comparison of GPs' and specialists' choice of journal as source of information on HIV and AIDS

Name of journal	No (%) of GP use	No (%) of specialist use	P value*	n =
SAMJ	116 (84.1%)	30 (90.9%)	0.317	171
South African Journal of HIV Medicine	74 (53.6%)	18 (54.5%)	0.924	171
Lancet	23 (16.7%)	13 (39.4%)	0.04	171
BMJ	18 (13.1%)	13 (39.4%)	< 0.001	170
AIDS Care Journal	18 (13.0%)	8 (24.2%)	0.107	171
AIDS Journal	14 (10.2%	9 (27.3%)	0.010	170
New England Journal	6 (4.4%)	12 (36.4%)	< 0.001	170
JAIDS	14 (10.1%)	3 (9.1%)	0.856	171
Clinical Infectious Diseases	9 (6.6%)	3 (9.1%)	0.612	170
AIDS Patient Care	6 (4.4%)	4 (12.1%)	0.090	170
JAMA	3 (2.2%)	1 (3.0%)	0.775	170
Other journals	27 (19.7%)	3 (9.1%)	0.151	170

*Chi-square or Fischer's Exact test was used.

Discussion

The respondents comprised a mature, experienced group of doctors, with the majority of the GPs and specialists aged over 40 years and having practised for more than 10 years.

In this study, a larger percentage of the specialists had cared for more than 200 patients during the preceding year than had the GPs, but many GPs refer patients to specialists.[10,11,12] A study conducted among physicians in the USA found that HIV-specific knowledge was more strongly associated with HIV caseload than with speciality training, suggesting that specialised knowledge in HIV care was obtained through clinical experience and self-education.[11,13]

The findings of this study point to the use of print sources, for example journals and textbooks, by the majority of doctors, followed by lectures (CME, workshops and conferences), colleagues and electronic sources. The journals that are sourced are peer-reviewed and/or accredited journals, with the majority of doctors indicating use of the SAMJ, and more than 50% using the South African Journal of HIV Medicine. The SAMJ is sourced by the majority of doctors because belonging to the South African Medical Association (SAMA) means that they receive the SAMJ every month. The journal is also easily accessible via the internet, therefore doctors read this the most. The South African Journal of HIV Medicine, a journal of the South African HIV Clinicians Society, is also provided free of charge to the society's membership and is accessible via the internet, but doctors may not have been members of the South African HIV Clinicians Society in 2005/6. This is confirmed by this study, as only 39.1% of the doctors stated that they belong to the society. Most of the other journals were not easily accessible via the internet, and cost and convenience could have played a role in doctors accessing the journals that were specific to HIV/AIDS.

Textbooks and colleagues were also indicated as important sources for information concerning HIV and AIDS. Information from the internet, however, appeared to be the least accessed. These findings are consistent with other studies, which showed that the least frequently used source of information was the internet, with 89% of medical practitioners having obtained their information by way of discussion with their doctor colleagues and the use of textbooks.[1]. Many doctors prefer to rely on colleagues as their main source of information[15,16] and CME, run by colleagues, was described as one of the best ways to obtain appropriate knowledge to care for HIV-infected patients.[11] A review published in 2006 showed that primary care physicians tend to consult their colleagues and their paper sources first for answers to their clinical questions, a practice that has not really changed through the years, despite the greater availability of and better access to electronic sources of information. The author further stated that one of the main difficulties reported by primary care physicians when seeking electronic information was the lack of sufficient time.[17] Another study also confirmed that physicians reported that little use was made of computer-based sources.[18] A study conducted among hospital-based doctors in Mongolia showed that discussions with colleagues were the most frequently used source of information for making clinical decisions.[16] However, among rural practitioners, textbooks were used more than journals, and these doctors, in addition, made less use of online databases due to multidimensional barriers that ranged from lack of time to poor telecommunications infrastructure and lack of computers.[15] In this study, more than 75% of the doctors cited attending CME courses as their source of information, and many studies have emphasised the need for CME as a means of improving the level of knowledge on HIV.[11,12,19]

With the HIV epidemic commencing just over 25 years ago, and drugs only having been available in the private sector since 1996, most of the respondents would not have obtained their training in HIV and AIDS via the universities and therefore would have had to rely on CME, supplementary courses, diploma studies, etcetera to become knowledgeable and competent to manage these patients. A study carried out in Barbados revealed that physicians who graduated in 1984 or earlier had lower levels of knowledge and were less likely to have ever attended a continuing education training course on HIV/AIDS.[20] Furthermore, private physicians in Texas, USA, and Mexico who had seen more than 1 000 patients in a year and had been out of training for more than

10 years, rated their knowledge of HIV/AIDS as average, but rated their knowledge of treatments for the disease as below average. These clinicians obtained their information about HIV/AIDS from journals rather than through formal continuing education, but were willing to attend education programmes to improve their HIV/AIDS management skills.[21] Many studies have highlighted the need for doctors to be able to manage HIV-infected patients appropriately and efficiently. Gaps identified in the management of HIV and AIDS patients ranged from doctors being poorly informed concerning practical issues of management,[22] to lower levels of knowledge about the disease; inadequate counselling skills;[20] lack of clinical knowledge;[21] and lack of medical skills.[12]

Journals were shown to be the most sought out source of information in this study; this could be due to the current information relating to the epidemic that is carried. Younger physicians have been found to be more up to date with regard to information on HIV, and also reported that medical journals were the most common source of information.[6] Most of the drugs used in treating HIV are not without serious side-effects, so doctors are constantly looking for new and current solutions in order to manage the side-effects. However a previous study reported that GPs most frequently rated medical journals as an important source of information for new and old drug information, but, in practice, more frequently accessed information on new drugs through pharmaceutical representatives.[23]

This South African-based study also found that more than 60% of the doctors obtained their information on HIV and AIDS from pharmaceutical representatives. These representatives also carry the latest information about their drugs and normally present these in detail to the doctors to motivate doctors to prescribe the company's product.

Limitations

Due to the relatively small sample, the results of this study cannot be generalised to all private sector doctors in the eThekwini Metro of KwaZulu-Natal. In addition, this being a self-reported study, the reliability of the information collected cannot be substantiated and the direction of the association may not be causal in this cross-sectional study. A further limitation preventing the results being generalised to all private sector doctors in the eThekwini Metro was that convenience sampling was used and only doctors who manage HIV and AIDS patients were enrolled in the study.

Conclusion and recommendations

Private health care sector doctors in the eThekwini Metro who are managing HIV and AIDS patients obtain their information from reliable sources in order to have up-to-date knowledge on the overall management of HIV-infected patients. These doctors should be encouraged to maintain their CME and to continue accessing journals and other sources that carry current and updated information, to remain abreast with the management of HIV-infected patients, especially in a region where HIV has such a high prevalence. The use of the internet should also be encouraged, as much information on HIV/AIDS can be sourced via this route and many journals focused on HIV are also available online.

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