

TRAINING, CURRENT PRACTICES AND RESOURCES OF A GROUP OF SOUTH AFRICAN  
HOSPITAL-BASED SPEECH-LANGUAGE THERAPISTS AND AUDIOLOGISTS WORKING WITH  
PATIENTS LIVING WITH HIV/AIDS

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ABSTRACT

*The present study employed a cross-sectional survey research design to investigate the training, current practices, and resources of a sample of South African hospital-based speech-language therapists and audiologists (SLTs & As) working with persons living with HIV/AIDS. Questionnaires were mailed to 50 SLTs & As working in the major provincial hospitals in Gauteng, Kwa Zulu Natal, Free State and Western Cape, and responses were obtained from 40 therapists. Data from the questionnaire were analyzed using descriptive statistics. The findings indicated that persons with HIV/AIDS were becoming an increasing part of the caseloads of the SLTs & As who were surveyed. Investigation of participants' training, knowledge, skills and confidence in the area of HIV/AIDS suggested that the group of SLTs & As surveyed did not perceive themselves to be adequately equipped to manage persons with HIV/AIDS. These findings highlight the need for improved undergraduate training of SLT & A students in the area of HIV/AIDS; more continuing professional development workshops on HIV/AIDS for qualified practitioners; better access to resources for SLTs & As working in the area; the formulation of a position statement on HIV/AIDS by SASLHA; and further research in this area.*

**Key Words:** HIV/AIDS, training, practices, South African speech-language therapists and audiologists

INTRODUCTION

In the last decade, there have been major advances in the medical and pharmacological fields, with the result that health care professionals are treating increasing numbers of patients living with Human Immunodeficiency Virus (HIV) or Acquired Immunodeficiency Syndrome (AIDS) (Curlee, 2000). Prophylactic interventions are reducing the incidence of opportunistic infections, and persons with HIV disease who have access to new life-prolonging drug therapies are living longer (Larsen, 1998). Many of these patients experience communicative and feeding disorders, and consequently the Speech-Language Therapist and Audiologist (SLT & A) must provide the necessary intervention. However, despite the burgeoning literature (Bankaitis & Schountz, 1998; Davis-McFarland, 2000; Larsen, 1998) on the various speech, language, hearing and dysphagia disorders associated with HIV/AIDS, very little research appears to have focused on the specific needs and concerns of SLP & As working in this field (Davis-McFarland, 2000).

Davis-McFarland and Layton (2000, p.3) believe that the AIDS pandemic, which is now in its third decade, "has been one of the most horrific public health calamities of the century". According to Crewe (1999) over 60% of the total number of people living with HIV are in Sub-Saharan Africa while South Africa is the country with the largest number of people living with HIV/AIDS. It is further estimated by Crewe (1999) that about four million South Africans are currently HIV infected, approximately 420 000 children in this country  
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have been orphaned, and 250 000 people die each year from the disease.

HIV/AIDS affects all areas of human development, namely gross and fine motor skills, cognitive and linguistic ability, psychosocial functioning, feeding, and emotional and physical health. In addition, Larsen (1998) reported that HIV damages the areas of the brain that are associated with attention, learning, and memory functions. The impact of HIV on cognition, language, motor and behavioural activities varies depending on time of onset, rate of decline, severity of deficits, and number of affected domains (McClowry, 2000).

Children who have been perinatally exposed to HIV were at risk for cognitive, academic and expressive-receptive language impairments (McCardle, Nannis, Smith & Fischer, cited in Layton & Davis-McFarland, 2000). Dysphagia and communicative deficits including voice disorders, phonological disorders, expressive language delays, and pragmatic language difficulties affect children with HIV (Curlee, 2000). Progressive central nervous system deterioration affects cognitive, linguistic, and motor functions. In adults the manifestations are dysphagia, articulation disorders, dysarthria, and insufficient respiratory support for speech (Davis-McFarland, 2000). These findings highlight the many communicative disorders experienced by children and adults with HIV.

Children living with HIV/AIDS often suffer opportunistic infections and diseases as a result of their immuno-compromised health status (Curlee, 2000). Head and neck manifestations are very frequent (Madriz &

Herrera, 1995). Oral pathologies as well as laryngeal and pharyngeal pathologies are common and ranged from infections, neoplasms, and inflammations to degenerative processes (Gold & Tami, 1998). HIV-related encephalopathy can cause deficits in oral-motor skills (Pressman, 1992), while abnormal muscle tone can interfere with sensorimotor conditions for oral-motor development in children and result in atypical patterns such as jaw thrusting (Davis-McFarland, 2000). Oral lesions in adults (Ditchel, 1992) and children (Davis-McFarland, 2000) resulting from Herpes simplex virus (Davis-McFarland, 2000) and candida (Gold & Tami, 1998) among others, lead to drooling (Davis-McFarland, 2000; Mintz, 1998), problems with sucking, chewing and swallowing (Davis-McFarland, 2000; Gold & Tami, 1998; Larsen, 1998), dysarthria (Mintz, 1998), hoarseness and airway obstructions (Gold & Tami, 1998).

Auditory system impairments and otopathologies are also common (Kohen, Rothstein & Cohen, 1988). Persons with AIDS are susceptible to many infections and neurological complications that compromise auditory function (Matkin, Diefendorf & Erenberg, 1998). The otologic diseases can be the result of bacterial, fungal or viral pathogens that infect the child with an immunocompromised system. The following infections and disorders have been documented as being HIV/AIDS-related: otitis externa, otitis media, mastoiditis, tympanic membrane perforation and cholesteatoma (Kohan, Rothstein & Cohen, 1988). Eustachian tube dysfunction can cause both adult and paediatric patients with AIDS to be susceptible to otitis media (Gold & Tami, 1998) while subacute encephalitis and AIDS dementia complex may cause vertigo (Lalwani & Sooy, 1992).

Bankaitis and Schountz (1998) argue that some drugs such as Azidothymidine (AZT) used to treat HIV/AIDS are ototoxic. Moreover, although the side effects of many antiretrovirals are yet to be determined, individuals with HIV are prescribed medications as prophylaxis or for the treatment of infections, that have been long associated with the progression of audiological and vestibular changes (Bankaitis et al., 1998).

Infants born to HIV positive mothers may be at high risk for a congenital hearing loss or for developing a hearing loss shortly after birth. In addition, ototoxic medications taken prenatally may cross the placental barrier and damage fetal ear structures (Bankaitis et al., 1998).

Consequently, the documented prevalence of hearing disorders and the predicted increase in the number of HIV/AIDS cases is likely to result in more HIV-infected patients pursuing audiological intervention, particularly from the standpoint of improving quality of life (Bankaitis, 1996).

Bankaitis and Schountz (1998) report that people with HIV suffer opportunistic infections that are associated with the development of either a sensorineural or a conductive hearing loss. These various otopathologies can exert a negative impact on the individual, especially since a hearing loss, along with concurrent developmental delays in a child with paediatric AIDS, can interfere with language learning and communication (Davis-McFarland, 2000; Layton & Scott, 2000).

All these speech, language, hearing and dysphagia manifestations suggest that speech-language therapists and audiologists have a crucial role to play in the management of HIV/AIDS. The role of a SLT & A includes establishing baseline measures at the time of diagnosis for comparison throughout the individual's life, providing therapy to correct, augment or preserve useful communication skills, and helping the family to manage the illness (Pressman, 1992).

An audiologist is required to carry out hearing assessments to monitor the patient's hearing, make appropriate referrals and manage the condition. Gold and Tami (1998) report that the auditory brainstem response (ABR) and auditory evoked potentials have been effective in supplying evidence of early neurological involvement in otherwise asymptomatic patients later diagnosed with several brainstem pathologies. The ABR may be useful in monitoring the progression of central nervous system involvement in infants and children with AIDS (Bankaitis, Christensen, Murphy & Morehouse, 1998). Lalwani and Sooy (1992) maintain that central pathology associated with abnormal auditory evoked potentials represents one of the few audiological manifestations directly attributable to HIV infection.

The speech-language therapist needs to monitor the development of language and communication skills and assess the effectiveness of antiretroviral therapies in the recovery of language abilities (Davis-McFarland, 2000). Adler (2000) believes that by maintaining or strengthening children's cognitive and language skills, it is possible to help them cope with the disease process because they are able to communicate their needs, desires, and feelings to caregivers.

It is also possible that acute or fatal illness may occur in several members of the same family, and therefore intervention must be family-centred. In addition, parenting issues become crucial when one, or both, of the parents is also infected (Wiener & Septimus, 1998). Consequently, SLP & As should become more aware of the psychosocial stresses associated with HIV/AIDS in order to better serve this population by including their families and other health care professionals in the total care environment.

According to Ryan (1990), service providers often experience emotional difficulty in working with patients who are terminally ill, since there is a very poor prognosis for recovery. Hence, health care professionals need to deal with their feelings in relation to death and the illusion of immortality. Closely related to issues of terminal illness are ethical dilemmas such as maintaining confidentiality, prolonging life in treating a technology-dependent condition and determination of valid consent when competence is declining because of dementia. Moreover, many service providers have fears about contracting the disease (Ryan, 1990). This fear is exacerbated by the problems experienced in maintaining consistent and appropriate infection control practices (Weiner, 1990). Other concerns of service providers include discomfort in dealing with a disease that is predominantly sexually transmitted as well as confronting feelings of AIDS phobia, as the disease was initially associated with bisexual and homosexual males, intravenous drug users and sex workers (Ross, 2001).

It can thus be seen that speech-language therapists and audiologists not only play a vital role in the

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management of communication and swallowing disorders in persons diagnosed with HIV/AIDS, but like all health care workers face tremendous challenges in dealing with the complex professional and psychosocial issues raised by the disease. In a country such as South Africa, where the rate of HIV/AIDS infection is inordinately high, and where there are limited resources available to meet the needs of affected individuals, the stresses confronting health care professionals are likely to be further exacerbated (White Paper for the Transformation of the Health System in South Africa, 1997). For these reasons, this study endeavoured to investigate the training, current practices and resources of a group of hospital-based SLTs & As working with persons living with HIV/AIDS in order to provide insight into their needs.

### METHODOLOGY

#### Aims

- 1) To investigate the undergraduate university education as well as training following graduation, of a group of hospital-based SLTs & As regarding HIV/AIDS, and to explore their perceptions of professional competence and emotional comfort in working with these persons.
- 2) To determine SLT & As' opinions about the nature of their role in assessing and treating persons with HIV/AIDS, current practices, and their experience of access to resources needed for working with these persons.

#### Research Design

In order to investigate the above aims of the study, a cross-sectional survey research design was employed (Babbie & Mouton, 2001) whereby data were collected from a cross-section of the population of hospital-based speech-language therapists and audiologists via a questionnaire at a point in time. This research design would enable the researchers to obtain the views of a relatively large sample of participants dispersed over a wide geographical area.

**Table 1. Demographic profile of participants (N = 40)**

Demographic Factor	No. of Participants	Percentage of Participants
<i>University of Graduation</i>		
Witwatersrand	10	25.0%
Pretoria	7	17.5%
Durban-Westville	8	20.0%
Cape Town	13	32.5%
Stellenbosch	2	5.0%
<i>Year of Graduation</i>		
before 1980	3	7.5%
1980-1984	2	5.0%
1985-1989	2	5.0%
1990-1994	7	17.5%
1995-2000	26	65.0%
<i>No. of Years Working in a Hospital</i>		
<1 year	11	27.5%
1 to <3 years	8	20.0%
3 to <6 years	8	20.0%
6 to <10 years	4	10.0%
>10 years	9	22.5%

#### Subjects

The only subject selection criteria adopted were that participants were required to be graduate SLTs & As employed in hospital settings at the time of the study. A purposeful sample was selected comprising SLTs & As working at 17 provincial hospitals in Gauteng, Kwa Zulu Natal, Free State and Western Cape. The reason for targeting hospital-based therapists was the assumption that they were more likely to have contact with persons diagnosed with HIV/AIDS than therapists working in other settings. Due to financial constraints, questionnaires were posted to only 50 SLTs & As. A total of 40 participants completed and returned the questionnaires within the specified time, representing a very good response rate of 80% (Babbie & Mouton, 2001). However, a limitation of the study is that it was conducted on a small, purposeful sample of hospital-based therapists; hence the results cannot be generalized to the broader population of SLTs & As in South Africa.

From Table 1 it can be seen that all the major South African universities that train SLTs & As were represented in the sample, with the University of Stellenbosch being somewhat under-represented – although the number of students enrolled at this institution is known to be less than at the other four universities. The highest proportion of participants, 65%, graduated during the period 1995-2000, while most, 68%, had less than five years' experience working in a hospital, suggesting that some participants had worked in other settings during this period.

#### Research Instrumentation

A postal questionnaire was used as the means of data collection. Some of the questionnaire items were adapted from a study of speech therapists working in the area of dysphagia by Modi and Ross (2000), while others were formulated by the researchers. The questionnaire is set out in Appendix A and comprised six sections. The questions took the form of closed response sets. Although closed-ended items had the advantage of being easier to answer and analyse, they tended to limit the type of responses obtained (Babbie & Mouton, 2001).

##### Section A: Biographical data

Demographic details of the respondents were elicited, such as year and university of graduation, as well as duration of employment in a hospital setting.

##### Section B: Training in the area of HIV/AIDS

Participants' undergraduate training in HIV/AIDS management was investigated and thereafter information was sought regarding participants' training post graduation. In hindsight, a weakness in the design of the questionnaire was the fact that no distinction was made between postgraduate training for degree purposes and training for non-degree purposes. Participants were asked to select from a list of options those areas that were covered theoretically and/or practically in their training. They also

had to rate the adequacy of their training on a six-point scale from non-existent to very good. Although the original response options ranged from very poor to very good, persons who participated in the pre-test indicated a need for a further response option, namely 'non-existent'.

#### *Section C: Knowledge and competence*

This section required participants to rate their knowledge, skills and confidence in managing patients with HIV/AIDS. The knowledge component targeted the modes of transmission of HIV/AIDS, procedures used in the assessment and treatment of patients diagnosed with HIV/AIDS, the roles of key members in the HIV/AIDS multidisciplinary framework, medical conditions associated with the disease, correct infection control practices, the national health care policy on HIV/AIDS, and communication and dysphagia problems associated with HIV/AIDS. It also included counselling of caregivers and family members of persons with HIV/AIDS, as well as ethical and psychosocial issues related to HIV/AIDS. Items were based on a comprehensive literature review (Davis-McFarland & Layton, 2000; Larsen, 1998; Ross, 2001) in addition to the ASHA scope of practice for audiologists and speech-language pathologists (1996).

#### *Section D: The SLT & A's perceived role in HIV/AIDS management*

Participants' perceptions of the SLT & A's role in HIV/AIDS intervention were probed, including the assessment and treatment of patients with HIV/AIDS, the provision of counselling and support to the patient and caregiver, and educating other health care professionals about the effects of HIV/AIDS on hearing, speech, language and swallowing. The rationale for including these items was based on the ASHA scope of practice guidelines for audiology and speech-language pathology (ASHA, 1996). Responses to this question required a forced-choice response of yes or no.

The researchers also endeavoured to elicit participants' views in respect of whether other medical professions recognized the role of the SLT & A in the management of persons with HIV/AIDS. Included in this section was a question that addressed whether participants felt that teamwork was necessary for managing persons with HIV/AIDS (Davis-McFarland & Layton, 2000).

#### *Section E: Current practices in HIV/AIDS management*

Items in this section were designed to determine the number of SLT & As working in the participants' departments, whether the participants had access to their clients' HIV/AIDS status, and the approximate number of persons living with HIV/AIDS treated by their colleagues on a monthly basis. Participants were required to select their answers from a range of response categories.

#### *Section F: Access to resources*

These items identified whether participants had access to other important health care professionals that are involved in the management of persons with HIV/AIDS, as well as access to adequate support networks. Participants were required to answer by means of a forced-choice yes or no response.

## **RESEARCH PROTOCOL**

### *Pre-test and ethics clearance*

Both the questionnaire and the covering letter/information sheet were pre-tested on two persons who met the subject selection criteria, but who were not included in the final study. The purpose of the pre-test was to enhance questionnaire validity and reliability by evaluating how participants interpreted the meaning of individual questions, and to check whether the range of response alternatives was adequate. Based on the comments and suggestions that arose from the pre-test, various amendments were made. Thereafter, the questionnaire was submitted to the University Medical Ethics Committee for Research on Human Subjects, in order to ensure that the study met requirements for protecting participants' social and psychological welfare, and respected their dignity and privacy. Mailing of questionnaires commenced after obtaining ethics clearance.

### *Procedure*

The Heads of the Departments at the 17 hospitals were contacted telephonically. Information about the purpose of the study was provided, and the number of therapists working in each Department was confirmed. Letters requesting permission were faxed to the Heads of the Departments. When permission was granted, the questionnaires were posted to the hospitals, and the due date for their return was stipulated in the covering letters. A follow-up letter was faxed to the Heads of Departments two weeks after the first mailing. One week later follow-up telephone calls were made to confirm that the hospitals had received the questionnaire, and to request heads of Departments to encourage therapists to fill out the questionnaires.

### *Data Analysis*

Descriptive statistics comprising percentages and cross-tabulations were employed to analyze the closed-ended responses obtained from the questionnaire. Descriptive statistics represent an aspect of a set of data with a single number (Babbie & Mouton, 2001).

## **RESULT AND DISCUSSION**

Results are presented in accordance with the aims of the study.

### **Training in HIV/AIDS and Perceptions of Competence/ Comfort in Working with these Persons**

#### *Undergraduate training*

The main finding that emerged from the study was that 68% of the participants reported not receiving any undergraduate training in the area of HIV/AIDS. This high proportion suggests a need for more information at an undergraduate level, particularly in the view of the fact that the Code of Ethics (SASLHA, 1997) states that SLTs & As should only provide services in the areas for which they hold the appropriate qualification and for which they are competent by training. A limitation of the study was that it did not probe which specific aspects of speech, language, hearing and dysphagia disorders related to HIV/AIDS were not included in the training.

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Only 33% of the participants in the study were taught about HIV/AIDS in their undergraduate courses. This was considered a very poor figure as Layton and Scott (2000) maintain that oral deficits and dysphagia problems are so common among patients with HIV/AIDS that SLTs & As are likely to be one of the first health care professionals involved in assessing these individuals. In addition, the sudden onset of hearing impairment is often the first sign of HIV in an otherwise asymptomatic person, and consequently, the SLT & A may be the first health care professional to assess and treat these patients (Real, Thomas & Gerwins, 1987). However, it is possible that participants were not taught specifically about HIV/AIDS but rather about communication deficits occurring within the context of a variety of causes. After all, SLTs & As do not treat HIV/AIDS, but rather individuals who have communication deficits resulting from HIV/AIDS.

Of the 13 respondents who were trained at an undergraduate level in the area of HIV/AIDS, the majority (84%) were trained in 1999 or later. This increase in training in HIV/AIDS over the years could probably be a response to the needs of the country and patients in hospitals. Twelve of the participants who were trained reported that the HIV/AIDS module was integrated into other speech-language pathology or audiology courses.

The responses to items assessing the theoretical and practical areas covered at an undergraduate level are reflected in Table 2.

### *Safety Procedures related to HIV/AIDS Management*

Inspection of the results in Table 2 indicates that the main theoretical area covered was in terms of safety procedures and universal precautions, which is not surprising if one considers that the ASHA Committee on Quality Assurance published a set of Universal Disease Precautions for speech-language pathologists and audiologists more than a decade ago to control exposure

from the work environment, and to protect the clinician and patient from human sources of infection (ASHA Committee on Quality Assurance, 1990).

### *Medical conditions resulting from a HIV/AIDS-related immuno-compromised system*

Bartlett and Finkbeiner (1993) mention the early medical symptoms of HIV infection, namely, fever, sweats, fatigue, joint pain, headaches, dysphagia or odynophagia, and enlarged lymph glands. The oral manifestations common to this stage of infection negatively affect mastication and swallow (Larsen, 1998). Only 7.5% of the participants had knowledge of the medical conditions resulting from a HIV/AIDS related immuno-compromised system.

### *Head and neck manifestations of HIV/AIDS*

Ditchel (1992) reports that nearly 100% of persons with AIDS present with head and neck manifestations during the course of the disease. However, only 5% of the participants in the present study reported that they learned about these manifestations in their undergraduate training. Again, these results are not unexpected as these manifestations are not necessarily unique to HIV/AIDS but are usually part of the symptom complex of resulting pathologies and infections.

### *Psychosocial issues related to HIV/AIDS*

Less than half, i.e. 42.5% of the participants in this study reported having covered this area in courses following graduation. This figure suggests a gap in knowledge relating to an important area. According to Ross (2001), many people with HIV/AIDS are confronted with psychosocial adaptive tasks, namely, maintaining a meaningful quality of life, retaining intimacy, coping with disfigurement and loss of function, and planning for the survival of family members and friends. These persons need support services including emotional support from professionals (Adler, 2000).

**Table 2. Theoretical and practical areas relating to HIV/AIDS covered at undergraduate level (N = 40)**

Theoretical Areas	Covered in training	Not covered in training
Medical conditions resulting from a HIV/ AIDS-related immuno-compromised system	7.5%	92.5%
Ethical issues related to HIV/AIDS treatment	22.5%	77.5%
Safety procedures related to HIV/AIDS management	32.5%	67.5%
The involvement of other health care professionals in HIV/AIDS management	5.0%	95.0%
Communication and swallowing problems associated with HIV/AIDS	12.5%	87.5%
Head and neck manifestations of HIV/AIDS	5.0%	95.0%
Psychosocial issues related to HIV/AIDS	10.0%	90.0%
<b>Practical Areas</b>		
Assisting with assessment and treatment of persons with HIV/AIDS under supervision of qualified professionals	10.0%	90.0%
Independent assessment and treatment of SLP/A difficulties in persons with HIV/AIDS	2.5%	97.5%
Interdisciplinary assessment and management of persons with HIV/AIDS	5.0%	95.0%
Counselling of persons with HIV/AIDS	0.0%	100.0%

Despite the well-documented fact that the AIDS virus can only be transmitted through bodily fluids, many health care professionals still harbour irrational fears of contagion through casual contact or touching the patient's bedding, clothing and eating utensils (Ross, 2001). Others are not aware of correct infection control methods (Adler, 2000). Consequently, Johnston and Ross (1991) recommend that educational and support programmes need to focus on attitudes and fears associated with providing health care to people living with HIV/AIDS in an attempt to reduce anxiety and promote positive and compassionate responses towards patients and their families.

#### Rating of undergraduate training

Not a single participant rated their undergraduate training as "very good". The majority (67.5%) of the participants rated their undergraduate training in the area of HIV/AIDS as "nonexistent". This finding could possibly be explained by the fact that participants who graduated before 1994 commented that at the time, HIV/AIDS did not appear to be an issue of concern to the profession. It therefore was not included in the curriculum. Those participants who had received training reported that it tended to be too basic or rudimentary, and did not help orientate them regarding what to expect in a hospital environment where the exposure of SLPs & As to HIV/AIDS was likely to be high.

However, a shortcoming of the study is that the researcher did not contact the various South African universities that train SLTs & As to ascertain whether the different aspects of HIV/AIDS were in fact incorporated into the curricula. It is possible that memory may have influenced the responses of some of the subjects – particularly those who graduated several years prior to the study.

#### Continuing Professional Development Following Graduation

In order to maintain a high standard of professional competence and keep up to date with new scientific developments and practice/service issues in communication disorders, SLP & As need to continue

their education after graduation. Three-fifths (60%) of participants had attended an HIV/AIDS conference, workshop, group discussion, course, or lecture since graduation. Table 3 illustrates the areas covered in courses attended following graduation and highlights the fact that important areas as determined by this study in the treatment of persons with HIV/AIDS had not been included in many of these courses.

Nearly two-thirds (62.5%) of participants in the present study had not covered *procedures related to the treatment of patients with HIV/AIDS* in courses following graduation. In terms of communication, many children with paediatric HIV present with problems in speech and language development, hearing and the ability to learn. A hearing loss can progress very quickly due to the ototoxic drugs, and therefore people with HIV need to have their hearing monitored more frequently.

In the late stages of the disease, persons often have difficulty swallowing (dysphagia) and experience pain when swallowing (odynophagia). The speech-language therapist has to be aware of monitoring the taste and temperature of the food given to these patients, as well as to be aware of reflux. Lesions on the gingiva, tongue, palate, and buccal mucosa contribute to dysphagia by impeding mastication and oral management of the bolus (Larsen, 1998). It is therefore the SLP & A's responsibility to provide treatment for these communication and swallowing disorders.

Table 4 shows that just over a third (35%) of respondents had covered *ethical issues* related to the management of persons with HIV/AIDS in courses following graduation. The ASHA Code of Ethics (1994, pp.43-44) states that the maintenance of the highest standards of morality and ethical principles is crucial to the responsible discharge of obligations in speech-language pathology and audiology. Ideally, no health care worker should display a discriminatory attitude towards any patient – not only persons with HIV/AIDS.

However, in addition to the ethical aspects applicable to all client-professional relationships, there are numerous ethical dilemmas confronting SLTs & As raised by the HIV/AIDS pandemic. These include unequal access to health services and medical drugs (Ryan, 1990), what to do when an HIV positive mother

**Table 3. HIV/AIDS topics covered in courses following graduation (N = 40)**

Areas	Covered	Not Covered
Procedures related to the treatment of persons with HIV/AIDS	37.5%	62.5%
Clinical practice of assessment and management of persons with HIV/AIDS	25.0%	75.0%
Implementation of universal precautions when treating persons with HIV/AIDS	50.0%	50.0%
Ethical issues related to the management of persons with HIV/AIDS	35.0%	65.0%
Head and neck manifestations of HIV/AIDS	17.5%	82.5%
Psychosocial issues related to HIV/AIDS	42.5%	57.5%

Note: The study addressed all courses attended following graduation rather than focusing only on formal postgraduate qualifications for degree purposes.

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refuses to allow her newborn baby to be given antiretroviral therapy; what steps to take when parents are reluctant to inform their pubertal age children that the latter are HIV positive; and how to react when a SLT & A observes symptoms of Kaposi's sarcoma on oral peripheral examination of the person and the latter refuses to disclose his or her HIV positive status to the partner.

In view of the fact that only 35% of participants in Table 4 reported that ethical issues had been covered in courses following graduation, it is imperative that SLTs & As be afforded the opportunity to be sensitized to these issues and engage in critical debates regarding their possible resolution.

However, in assessing these results, it appeared that a limitation of the study was the fact that participants were presented with a pre-determined set of categories rather than being asked to list the courses, describe what aspects they covered or the extent or depth of coverage. A further weakness inherent in the questionnaire design was the fact that participants were not asked for reasons why they had attended such courses.

None of the participants rated their training as "very good". Of the 24 participants who attended these courses, five had graduated prior to 1989, three graduated in the years 1990-1994, and sixteen graduated from 1995 onwards. In hindsight, a limitation of this section of the questionnaire is that it only focused on continuing professional development through attendance at workshops and conferences and did not probe independent reading of books and journal articles as part of life long learning.

Five participants (12.5%) were very satisfied with the information they obtained at conferences and workshops. They felt that the material presented equipped them with the necessary knowledge for managing persons with HIV/AIDS, particularly from a counselling perspective. Seven of the participants

(17.5%) reported that the information presented at the workshops was usually an overall view of HIV/AIDS geared to health care workers in general, but did not apply to SLTs & As' specific areas of work. Although the specific foci of courses was not probed, overall results suggest that the course content presented to graduates was inadequate in terms of addressing advances in the field, as well as the effects of HIV/AIDS on speech, language, swallowing and hearing.

### Knowledge and Competence

Table 4 represents the results obtained from the item in the questionnaire which assessed participants' self-rating of their knowledge, skills and confidence in dealing with various aspects of HIV/AIDS.

Most of the participants tended to rate their knowledge as average with the exception of modes of transmission which 70% rated as being good or very good. Assessment and management skills were also rated as average, while 60% considered their counselling skills to be poor or very poor. The majority of participants also lacked confidence in engaging in counselling or dealing with psychosocial issues.

With respect to psychosocial issues, Larsen (1998) believes that as rapport between the client and therapist develops during therapy, the client is likely to start confiding in the therapist. The social isolation that results from HIV infection generally causes people to turn to their therapists for emotional support (Larsen, 1998). It is therefore necessary for SLT & As to have a good understanding of the emotional and psychological strain caused by the awareness of being HIV positive. This insight can potentially help them to handle their clients' emotional expressions appropriately.

However, in assessing results from this section, it should be borne in mind that the questionnaire probed participants' perceptions or self-ratings of their level of knowledge and competence rather than ascertaining

**Table 4. Self-perceived rating of knowledge, skills and competence with respect to HIV/AIDS (N=40).**  
(Results reflect percentages)

<i>Knowledge</i>	Very poor	Poor	Average	Good	Very good
Modes of transmission	2.5	12.5	15.0	37.5	32.5
Procedures used in assessment & treatment	17.5	25.0	42.5	15.0	0.0
Roles of team members	12.5	25.0	40.0	22.5	0.0
Associated medical conditions	10.0	20.0	45.0	22.5	2.5
Infection control practices	12.5	30.0	22.5	32.5	2.5
Health care policy	20.0	25.0	35.0	17.5	2.5
Associated communication & swallowing problems	12.5	25.0	35.0	25.0	2.5
<i>Skills</i>					
Assessment & management	17.5	25.0	45.0	12.5	0.0
Counselling	22.5	37.5	25.0	12.5	2.5
<i>Confidence</i>					
Handling persons with HIV/AIDS	7.5	30.0	42.5	20.0	0.0
Providing appropriate treatment	17.5	22.5	40.0	17.5	2.5
Counselling / dealing with psychosocial issues	20.0	40.0	22.5	12.5	5.0

objective evaluations of that knowledge. It is also possible that some participants could have furnished socially desirable responses that could have affected the validity of the findings.

### **The Perceived Role of SLTs & As in HIV/AIDS Management**

The views on the SLT & A's role in HIV/AIDS management are reflected in Table 5.

According to Table 5 all of the participants believed that the SLT & A had a role to play in the management of such persons if there was a speech, language, voice, hearing or dysphagia problem. These results were expected as the role of the SLT & A in the area of HIV/AIDS is well supported in the literature (Larsen, 1998). According to Larsen (1998), the treatment procedures currently used in the cases of motor speech disorders, language impairments, cognitive deficits, dementia, hearing impairments, and dysphagia difficulties may be applied to patients with HIV/AIDS.

Johnston and Ross (1991) claim that SLT & As are in a position to inform and educate other health care professionals, and thus contribute to multidisciplinary efforts to provide appropriate intervention. Audiologists provide education that pertains to the identification, assessment, and non-medical management of auditory, balance, and related disorders (ASHA, 1996).

Only 17.5% of respondents believed that the role of the SLT & A in the management of communication and dysphagia disorders associated with HIV/AIDS was fully recognized by other health care professionals, nearly half of the participants (47.5%) felt that their role was partially recognized by their medical colleagues, and 35% felt that their role was not recognized at all. These findings underscore the need for SLT & As to educate other health care professionals regarding their potential role in the HIV/AIDS management team. Cornett (1994) supports this view when he states that it is the medical SLT & A's role to provide in-service education to other professionals, as well as participate in formal and informal professional education activities. However, a limitation of the study is that participants were not asked how many of them actually engaged in information sessions with other health workers or multidisciplinary teamwork generally.

### **Current Practices in HIV/AIDS Management**

Almost half of the participants (47.5%) reported working in departments consisting of 1 to 5 therapists, while 45% worked in departments comprising 6 to 10 therapists. Five of the participants (12.5%) were the only ones working in their departments at the time of the study. These figures are not unexpected as Buch (1998) explains that the limited number of staff employed in provincial

hospitals can be attributed to financial problems in the Department of Health. At first glance, the fact that 12.5% of the participants reported working alone in their respective departments is cause for concern as it raises questions about the availability of support networks necessary for counteracting the stresses of working with patients with HIV/AIDS in addition to working with other patient populations.

The largest proportion of participants (42.5%) reported treating a minimum of 1 to 5 persons diagnosed with HIV on a monthly basis. What seemed to be apparent was that participants did not necessarily have accurate information on the number of persons with HIV/AIDS seen and therefore the numbers varied widely from five per month or six per annum to speculation that two-thirds of all persons in their caseloads were HIV positive. Three of the participants (7.5%) stated that it was not relevant whether persons had HIV/AIDS in terms of their treatment, because the focus was not on the HIV, but rather on the presenting communication disorder.

### **Access to Resources**

All participants mentioned that they had access to their clients' retroviral status, if it was disclosed in their files. Just under a quarter (22.5%) of the participants in the study reported having access to a system of supervision or mentoring operating in their departments at the time of the study. Four of the participants (10%) reported that they had access to informal support networks within their own departments, or they engaged in informal discussions with other professionals. Reasons for perceiving a support network as being necessary included the fact that such groups provide information and emotional support, help professionals to debrief, and facilitate multidisciplinary teamwork.

In addition to support groups, all of the participants in the study had access to a medical doctor, nurse, and social worker. Just under a fifth (17.5%) had no access to a neurologist, and just more than two-fifths (42.5%) had no access to a virologist. The virologist is an important member of the HIV/AIDS management team. In some clinics the virologist is the HIV/AIDS case manager, and identifies any infections in the patient that could affect treatment. In addition to these aforementioned professionals, some participants also had access to other professionals not listed in the questionnaire, namely, a psychiatrist, neurosurgeon, cardiologist, radiologist, paediatrician, pharmacist and technologist.

### **CONCLUSION**

An important finding that emerged from the study was that participants appeared to have received

**Table 5. Perceived Role of the SLT & A in HIV/AIDS management (N = 40)**

<b>Perceived Role of the Speech-Language Therapist and Audiologist</b>	<b>Yes</b>	<b>No</b>
Assessment of communication deficits in persons with HIV/AIDS	97.5%	2.5%
Treatment of persons with HIV/AIDS	95%	5.0%
Counselling and providing support to the persons with HIV/AIDS and caregivers	92.5%	7.5%
Educating other health care professionals about the effects of HIV/AIDS on hearing, communication and swallowing	92.5%	7.5%



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minimal formal training about HIV/AIDS and the impact on communication and swallowing. Most of the participants perceived that their knowledge and skills in the area of HIV/AIDS management was inadequate, and that they lacked confidence in dealing with such persons.

These findings have important implications for the education of undergraduate students as well as for the continuing professional development of qualified SLTs & As in the area of HIV/AIDS. These results also have implications for access to other health professionals and support networks on the part of SLTs & As working with persons living with HIV/AIDS; the development of a position or policy statement on HIV/AIDS by the South African Speech-Language-Hearing Association (SASLHA); and further research.

In terms of education, the curriculum content is crucial since it determines how well the graduate is prepared for clinical practice. Throughout the world, higher education is changing or being challenged to change (Pickering & McAllister, 1997). There is often a mismatch between what is needed from university curricula and what is received by students (Pickering & McAllister, 1997). Consequently, curricula need to be revised at appropriate intervals to ensure that they reflect the current trends in health care and satisfy the changing requirements and needs of health care professionals. Findings from the present study suggest that current curricula are perceived by SLT & A graduates to be inadequate with regard to counselling skills necessary for working with these persons, as well as knowledge components of HIV/AIDS such as prescribed medication and the side effects, head and neck signs and symptoms, how HIV/AIDS affects cognitive functioning, and how to adjust treatment techniques to be specific to persons with HIV/AIDS. In addressing this issue, Johnston and Ross (1991) maintain that SASLHA and universities need to assume joint responsibility for the education of students as well as for the Continuing Professional Development of qualified practitioners.

It is also recommended that undergraduate students receive more practical hands-on experience with persons living with HIV/AIDS, not only in hospital settings but also in Homes for AIDS orphans. In this way they can engage in academic service learning which integrates academic learning and relevant community service (Stanton, 2000). Of particular relevance to personnel involved in supervising academic service learning projects in the area of HIV/AIDS is the need not only to provide intellectual challenges but also emotional support and debriefing for students. Such projects are in line with the current HIV/AIDS/STD Strategic Plan for South Africa 2000-2005 (ANC, 2000), which highlights the need to promote improved treatment, care and support in health facilities, build the capacity of health professionals to provide comprehensive treatment, as well as develop and expand the provision of care to children and AIDS orphans.

However, education and clinical training is not only applicable at the undergraduate level. In order for professionals to maintain their proficiency as clinicians and their capacity to deliver quality services, it is essential to keep abreast of new knowledge through continuing professional development. In this way they may also be better equipped to educate other health care professionals on the role of the SLT & A in managing

speech, language, hearing, and dysphagia disorders associated with HIV/AIDS.

In addition to educational needs, there are many emotional pressures related to caring for patients with HIV/AIDS. Consequently, SLTs and As would appear to need access to resources which could assist with the expression and discussion of feelings experienced through providing health care to individuals and families living with HIV/AIDS (Johnston and Ross, 1991). It is therefore recommended that SLTs & As be encouraged to join or form support groups in conjunction with other rehabilitation professionals. Moreover, in view of the multisystemic nature of HIV disease, ready access to other consultants has the potential of facilitating the care of people with HIV/AIDS at all stages of the disease (Larsen, 1998).

With respect to policy formulation, at the time of conducting this research project, a position paper on HIV/AIDS for SLTs & As did not yet appear to be available in South Africa. It is therefore recommended that the Professional Board for Speech-Language Therapists and Audiologists, develop a policy statement on the role of the professions in relation to HIV/AIDS, including ethical guidelines, and content and standards of training at an undergraduate level, as well as following graduation (including formal post-graduate training as well as informal continuing professional development courses for non-degree purposes).

In terms of further research, Larsen (1998) reports that there is a need for efficacy data regarding the prognosis for success with using traditional therapy approaches with persons diagnosed with HIV/AIDS. The reporting of individual case studies would be beneficial in this regard. There is also a need for further research into the linguistic deficits experienced by children infected with HIV/AIDS, in order to plan optimal speech and language therapy management of such children. Longitudinal studies that follow these children over several years enhance the profession's understanding of the effectiveness of speech-language therapy. Finally, further research needs to be carried out to investigate the prevalence of dysphagia disorders in adults with HIV/AIDS, as well as the ototoxicity of drugs used to treat HIV/AIDS.

In conclusion, even though many SLTs & As are currently not confident working in the area of HIV/AIDS, they need to bear in mind that "no one is useless in this world who lightens the burden of it for another" (Charles Dickens). Furthermore, despite the fact that working with individuals and families living with HIV/AIDS can be extremely stressful, evoke strong emotions and challenge deeply rooted attitudes and values, it can teach health care professionals a great deal about courage, compassion and the human spirit, and provide extraordinary rewards for those who provide therapy in this field of service (Curlee, 2000).

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APPENDIX A

**QUESTIONNAIRE ON TRAINING, CURRENT PRACTICES AND RESOURCES OF SOUTH AFRICAN HOSPITAL BASED SPEECH-LANGUAGE THERAPISTS AND AUDIOLOGISTS WORKING IN THE AREA OF HIV/AIDS**

**Section A – Biographical Data**

1. Please indicate your year of graduation and the university attended.  
 Year of graduation .....  
 University attended .....

For how long have you been working in a hospital?

**Section B – Training in the area of HIV/AIDS**

***Undergraduate Training***

1. Was HIV/AIDS taught in your undergraduate course?
2. If yes, was the HIV/AIDS module taught as a separate course or integrated into other speech pathology / audiology courses?
3. Please indicate which of the following areas were covered theoretically in your HIV/AIDS course. Place a tick in the relevant column.

Theoretically	Yes	No
Medical conditions resulting from a HIV/AIDS-related immuno-compromised system		
Head and neck manifestations of HIV/AIDS		
Communication and swallowing problems associated with HIV/AIDS		
Psychosocial issues related to HIV/AIDS		
Ethical issues related to HIV/AIDS treatment		
Safety procedures related to HIV/AIDS management		
The role of other health care professionals in HIV/AIDS management		

4. Please indicate which of the following areas were covered practically in your HIV/AIDS course. Place a tick in the relevant column.

Practically	Yes	No
Assisting with assessment and treatment of persons with HIV/AIDS under supervision of qualified professionals		
Independent assessment and treatment of persons with HIV/AIDS		
Interdisciplinary assessment and management of persons with HIV/AIDS		
Counselling of persons with HIV/AIDS		

5. Please rate the adequacy of your training in HIV/AIDS on a six-point scale from non-existent (0) through to very good (5).

Non-existent	Very poor	Poor	Neutral	Good	Very good
0	1	2	3	4	5

***Continuing Education Following Graduation***

1. Have you attended any HIV/AIDS conferences, workshops, group discussions or lectures since graduation?
2. If yes, please indicate which of the following areas were covered in these courses. Place a tick in the relevant column.

Areas Covered	Yes	No
Procedures related to the treatment of persons with HIV/AIDS		
Clinical practice of assessment and management of persons with HIV/AIDS		
Implementation of universal precautions when treating persons with HIV/AIDS		
Head and neck manifestations of HIV/AIDS		
Ethical issues related to the management of persons with HIV/AIDS		
Psychosocial issues related to HIV/AIDS		

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Please rate the adequacy of your training in HIV/AIDS following graduation on a six-point scale from non-existent (0) through to very good (5).

Non-existent	Very poor	Poor	Neutral	Good	Very good
0	1	2	3	4	5

**Section C – Knowledge and Competence**

Please rate yourself on a five-point scale from very poor (1) to very good (5) with respect to the following areas:

	1	2	3	4	5
<i>Knowledge</i>					
Modes of transmission of HIV/AIDS					
Procedures used in assessment and treatment of persons with HIV/AIDS					
Roles of key members of the HIV/AIDS multidisciplinary team					
Medical conditions associated with HIV/AIDS					
Infection control practices					
Health care policy on HIV/AIDS					
Communication and swallowing problems associated with HIV/AIDS					
<i>Skills</i>					
Assessing and managing persons with HIV/AIDS					
Counselling persons with HIV/AIDS					
<i>Confidence</i>					
Handling persons with HIV/AIDS					
Providing the most appropriate treatment					
Counselling caregivers/family members of persons with HIV/AIDS/ Dealing with psychosocial issues in HIV/AIDS					

**Section D – The Role of Speech-Language Therapists and Audiologists in HIV/AIDS Management**

- Do you believe that the speech-language therapist and audiologist has a role to play in the management of persons with HIV/AIDS?
- If yes, which of the following areas do you think this role should include?

<i>Role of the speech-language therapist and audiologist</i>	Yes	No
Assessment of persons with HIV/AIDS		
Treatment of persons with HIV/AIDS		
Counselling and providing support to persons with HIV/AIDS and caregivers		
Educating other health care professionals about the effects of HIV/AIDS on hearing, communication and swallowing		

- To what extent do you think your medical colleagues recognize the role of the speech-language therapist and audiologist in the management of HIV/AIDS? Place a tick in the relevant column.

Fully recognised	Partially recognised	Not recognised at all
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**Section E – Current Practices in HIV Management**

- How many other speech-language therapists are working in your department at present?
- On average, how many persons with HIV/AIDS (paediatric and adult) are seen by your department per month?
- On average, how many persons with HIV/AIDS (paediatric and adult) are treated by you per month?

**Section F – Access to Resources**

- Do you have access to your clients' retroviral status?
- Which of the following health care professionals do you have access to at your hospital?

<i>Professional</i>	Yes	No
Medical doctor		
Nurse		
Virologist		
Social worker		
Psychologist		
ENT		
Dietician		
Occupational therapist		
Physiotherapist		
Other (Please specify)		

3. Do you have access to any support groups for professionals treating persons with HIV/AIDS?

Thank you for your co-operation.