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Author(s): Kofi Awusabo-Asare and Constance Marfo

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Attitudes to and management of HIV/AIDS among health workers in Ghana: the case of Cape Coast municipality*



Kofi Awusabo-Asare^a and Constance Marfo^b

^aDepartment of Geography and Tourism, University of Cape Coast, Cape Coast, ^bMinistry of Health, Cape Coast.

Abstract

Health Care Workers as key players in the prevention and management of diseases and important opinion and community leaders have become targets for studies, more so with the outbreak of HIV. Their perceptions, attitudes and practices have implications for the management of diseases in both health centres and communities.

This study reports some of the results of in-depth interviews with Health Care Workers in the Cape Coast municipality (Ghana) on their perception of risk of exposure to HIV, attitudes to known persons with HIV/AIDS, counselling and confidentiality. Results indicate a general fear of infection given the working environment and conditions such as the insufficient supply of basic items, and inadequate information on the sero-status of some patients. Although aware of the basic precautions needed to avoid infection, some health workers did not follow them. There was also a lack of consensus among them on the issues of confidentiality and responsibility towards a discordant partner. The main arguments were those of the general debate between safeguarding individual rights and protecting the common good. It is important for the medical establishment to debate the issue so that the rights of some individuals are not compromised.

Health care workers have been targets for studies involving the spread of infectious diseases, increasingly since the outbreak of HIV/AIDS. Such studies have tended to concentrate on exposure to risk at work, knowledge and attitudes about some diseases, and training and practice in the management of diseases (Mkuye et al. 1991; Walrond 1992; Sow et al. 1993; Garcia et al. 1994). Health care workers have been studied because they are essential in the prevention and management of diseases and important opinion leaders in their communities, and their perception of exposure to risk can influence the management of patients and diseases. Although an identifiable group, health care workers consist of a range of medical and paramedical personnel with varying levels of exposure, perception of risk and attitudes to diseases.

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This paper discusses the perception of risk of HIV infection, attitudes and practice of a sample of physicians in the management of HIV in the Cape Coast Municipality. The study reported is part of a bigger study which examined the management of HIV/AIDS among a wide range of health workers in the municipality. The issues addressed are the perceived risk of the health workers within the context of their working environment, their dealings with HIV patients and some of their dilemmas in the management of HIV.

Conceptual framework

Vulnerability to infection

It has long been recognized that individual action and membership of a collective have implications for a person's health status (Omran, 1971; Aase 1992; Caldwell, Orubuloye and Caldwell 1994; Cohen and Trussell 1996;). However, with HIV infection in the last two decades, the concept of individual and collective vulnerability has emerged as one of the theoretical perspectives used to explain the incidence of HIV/AIDS among individuals and groups. Mann and Tarantola (1996) have defined vulnerability to HIV infection as a range of conditions which render an individual or community susceptible to HIV infection, and inadequate care and societal support. The concept provides a broad perspective for examining risk-taking behaviour, recognizing the link between social environment and individual risk-taking behaviour, and understanding individual behaviour which may be masked by focusing on a group.

As currently used, the concept has been mostly applied to groups such as adolescents, women, prostitutes and long-distance truck drivers, people considered to be in the high-risk category, first as individuals and second as members of the group. This study applies the concept to health workers as a group likely to be at risk due to the nature of their occupation, since this may expose some of them to infection while on routine duty either through accident, negligence, inadequate protection or other unforeseen circumstances.

Epidemiological studies have confirmed an association between occupational exposure and infection with some diseases. For instance, there have been reported associations between the time of exposure and the presence of hepatitis B viral markers (Garcia et al. 1994). In a study in Mexico of 12,151 adult HIV/AIDS cases reported by 1993, 2.9 per cent (335) were health workers and two cases were directly linked to occupational transmission while in 45 cases (13.4%) no risk factors were identified. The proportion with unidentified risk factors among the health workers was found to be similar to the proportion in the general population, 14.4 per cent (Garcia et al. 1994). Although observed unidentified risk factors among health workers were similar to those in the general population, the nature of their occupation can influence their perception of risk. In Ghana, the reported case of Dr. Mary-Ann Okine is a reminder of the risk faced by some of our medical personnel.

Perception of risk

Health workers in sub-Saharan Africa have been reported to perceive themselves as being at high risk of HIV infection (Mkuye et al. 1991; Kiamenyi and Ndung'u 1994; Adelekan et al. 1995). Of 267 health workers interviewed in Dar-es-Salaam, Kilimanjaro and Mwanza districts of Tanzania, 72 per cent perceived themselves to be at high risk of HIV infection (Mkuye et al. 1991). On the other hand, Li et al. (1992) have reported that the majority of health workers in China perceive AIDS to be a threat to others but not to themselves and their families. These differences in perception partly reflect the reality of the problem in

Africa and in China. For Africans, the relatively high reported rate of infection may have contributed to the high reported perception of risk of HIV infection.

Exposure at work to risk of infection, which may be actual, potential or imagined, is at the core of occupational health and safety. For health workers the risk may be real in that some may be exposed to risk within the working environment either through lack of protective clothing, inadequate working tools and equipment or not adhering to known safety measures. On the other hand, the risk may be imaginary arising from prevailing views on a particular disease among the general population, inadequate information and rumours.

The level of perceived risk may in turn influence the management of some diseases. Sow et al. (1993), in their study of health care workers from sub-Saharan Africa who attended the Eighth International Conference on STDs and AIDS in Amsterdam in 1988, observed that permission to test HIV patients was not asked although 67 per cent favoured mandatory testing for terminal AIDS patients and 55 per cent for tuberculosis patients. In a similar study, Adelekan and colleagues (1995) reported that 35 per cent of the 111 physicians interviewed in Nigeria said that they would not perform surgery on persons known to have AIDS even if they took all the necessary precautions, while 35 per cent of the 95 nurses would hesitate to nurse persons with AIDS. Some of these issues are explored in this paper.

Method

The focus of the study was to collect qualitative data on the knowledge, attitudes, behaviour and reactions of health workers to HIV infection as well as aspects of the management of the disease in the Cape Coast Municipality. It was meant to provide a general view about some of the issues that could be addressed to enhance the management of HIV/AIDS in both public and private health establishments in the municipality.

The specific objectives of the study were to examine the attitudes of health care providers on a wide range of issues in the management of HIV/AIDS in both public and private health institutions in the Cape Coast Municipality; solicit the views of health care workers on how to improve data collection and the management of HIV/AIDS in health institutions in the municipality; and consider the implications of the findings for policy, planning and the design of intervention activities for improving the quality of HIV/AIDS service offered by health workers.

Study population

The Cape Coast Municipality has at least four kinds of health institutions: the general government hospital, Cape Coast Central Hospital, with its three supporting health centres; two specialized national hospitals, a leprosarium and a mental hospital, at Ankaful; a quasi-government hospital belonging to the University of Cape Coast; and private health facilities. The last consist of hospitals, clinics, maternity homes and trained traditional birth attendants. In order to capture the dynamics of HIV management in the municipality, samples were selected from each of the categories.

The Central Hospital, as the main referral hospital in the region, was purposively selected. The three supporting public health centres, Ewim and Adisadel Health Centres and the Maternal and Child Health clinic at Aboom, were also selected as a result of the services offered at each of the three centres. The University of Cape Coast Hospital as a quasi-public institution was selected because of the nature of its clientele. Within the private sphere, seven private hospitals and a clinic run by the Planned Parenthood Association of Ghana were selected. In addition, two private laboratories, two maternity homes and four

traditional birth attendants were selected. The selection of the number of public and private health institutions for the survey was based on the national proportion of 60 per cent of doctors and nurses in public and 40 per cent in private health facilities.

The third level involved the classification of the medical and paramedical staff in the selected institutions according to their activity and grades within their category. These were medical doctors by their specialization, nurses by their specialization or nature of services offered, laboratory workers, ward orderlies and social workers. In each facility the numbers of medical doctors and nurses were selected proportional to size. However, where the number was small, as with laboratory technicians, all the staff were interviewed. The total number of respondents interviewed in the study was 80.

Data collection techniques and tools

Two instruments were developed for the survey: in-depth interview and focus-group discussion guides. The in-depth interview guide was developed for all the identified respondents and covered attitude and practice, counselling and management of HIV. Given the nature of the disease and the known reactions from the general population (Addo-Yobo and Lovel 1992; Ametewe 1992; Anarfi 1993; Awusabo-Asare and Anarfi 1995), it was considered appropriate to use a qualitative data collection technique to explore the issues in detail. The focus-group discussion guide also covered similar areas but was administered only to nurses at the Ewim and Adisadel health centres. The focus groups were organized to obtain additional information from nurses as well as use the responses to validate some of the results from the in-depth interviews. The results presented here are from the responses of physicians on their perception of risk, counselling, experiences with suspected and diagnosed HIV patients and confidentiality.

Results

Thirteen physicians, all males, were interviewed. Of the 13, six were in public and seven in private practice. All of them had either seen or treated a person with AIDS. One physician reported dealing with 62 cases between 1992 and 1995.

Exposure to risk

In the study, the health workers were asked to assess their level of risk of HIV infection. They were generally divided on their perception of exposure to risk of infection. Thus, the responses of the physicians were: posed a threat 7; risky 1; no threat 5; total 13. The reasons given for thinking that HIV was a threat were first the inability to identify infected persons due to lack of facilities, so that some workers may not take necessary precautions to avoid cross-infection at work; second, the general working environment which is characterized by shortages. The six public health physicians felt that they, or some of their nurses, could be at risk due to the inadequate supply of basic items such as disinfectants, gloves and other protective clothing. However, in spite of their answers about the threat of the disease to them, they indicated that the actual risk would be very low if they adhered to basic safety measures applicable to other diseases, such as the use of gloves for invasive examinations; disinfecting; proper handling of specimens; and adequate disposal of used items.

Some of the physicians also had inadequate information about some of the people they treated. In some cases it was not possible to test for the serostatus of suspected HIV-seropositive persons before beginning treatment, particularly with referrals and accident cases rushed to the Central Hospital. Therefore, some of the health personnel reported treating some of the patients before receiving details about their serostatus. Thus, in the in-

depth interview, one physician reported: 'It was after I had operated upon a patient that I got to know that the person was HIV positive'. Asked if that information would have made a difference, his response was 'No', because he had taken all the necessary precautions to protect himself, but the information would have helped a great deal. On the other hand, he reported a case where some members of the support staff refused to assist in an operation when they were informed that the patient to be operated upon was HIV-positive. Given the prevailing atmosphere, some of the physicians face the dilemma of either withholding information from support staff for fear of non-co-operation, or informing the staff and not being able to treat a patient.

One physician insisted that he would not perform surgery on a person he knew to be HIV-positive, considering the risk involved. But as an afterthought he added: 'but where it is a matter of life and death I must save the person; but then I will take all the necessary precautions'.

Some of the health personnel had felt vulnerable at work because of the circumstances surrounding their work, leading to perceived high risk of infection. One nursing sister recounted one of her experiences:

I helped to deliver the baby of a woman who was rushed to the hospital from a village. Immediately she arrived at the out-patients department she went into labour. I had no choice but to help her deliver because at that point the baby was coming out. I did that without any protective clothing and without thinking about the consequences of my action. Later on I asked myself ... 'what about if that woman was HIV positive?'. But I had already taken the risk.

Under such emergency conditions her options as a health care worker were limited. She took the step to save a life. In hindsight it was a big risk that she took. Thus, the inadequate supply of items coupled with the lack of information about the serostatus of a person and emergency conditions, increases the perceived risk of HIV infection for some health workers.

The issue of inadequate supply of materials is not peculiar to the health staff in the Cape Coast Municipality. In the report of the Epidemiology Division of the Ministry of Health in 1993, it was acknowledged that the lack of basic items such as gloves, and other logistics hampered work not only with HIV, but with other infectious diseases.

The inadequate supply of protective items similarly plagues the health sector of some sub-Saharan African countries as reported from Kenya (Anna et al. 1990; Kaimenyi and Ndung'u 1994) and Tanzania (Mkuye et al. 1991). Availability may not necessarily be translated into use. Anna et al. (1990) and Mkuye et al. (1991) both in Kenya, and Garcia et al. (1994) in Mexico, observed that even though gloves were available they were not used in some cases because the health workers felt that their use was not necessary or wasted time.

The five physicians who did not consider HIV as a threat pointed out that diseases like that had occurred before and that the present outbreak of HIV was not going to be the last. Furthermore, if they followed basic safety standards they could avoid work-related transmission of HIV.

Health worker-patient interface

Some of the health workers had to deal not only with their perceptions and attitudes but also with the reactions of some of the patients which in turn influenced their perception. HIV infection is characterized by hysteria and stigma causing some of patients to lie about their serostatus if they knew it, or their history of travel outside Ghana if they were suspected to

be HIV-positive, since a history of travel outside Ghana has been highlighted in the media as a co-factor of HIV infection.

Although the physicians reported their interaction with known or suspected HIVpositive patients as normal, on professional lines or empathizing with them, they seemed to be cautious in their dealings with some of the patients. In this section some of the dilemmas faced by the physicians are explored. The areas identified are disbelief expressed by some of patients when informed about their HIV status and refusing to return to collect test results.

Disbelief among patients

Available evidence suggests that most HIV cases in Ghana are diagnosed symptomatically. In a number of cases tests are requested to confirm the worst fears of the health personnel because a number of patients use a hospital when they are at the stage of seroconversion to AIDS. However, some patients or accompanying relations, in spite of the overwhelming evidence, may doubt the reported serostatus. According to the doctors some people challenge their test results, claiming that the blood sample might have been somebody else's or the laboratory assistant, the nurse or physician might have made a mistake. Such reactions, part of the denial syndrome that has been observed in a number of studies on terminal diseases including HIV infection (Kubler-Ross 1970; Awusabo-Asare and Agyeman, 1993), create problems for health personnel when dealing with some patients, influencing their perception of the person especially when HIV is suspected.

Not returning for test results

The disbelief manifests itself in several ways. One general pattern reported by the health workers was that some of the patients do not return to the hospital to collect their test results, creating additional problems for the management of the disease. While the clinicians are not able to complete their treatment after the initial contact, the counsellors are not able to follow up the patient. The refusal to return for results, coupled with an inadequate address system or the giving of false addresses¹ and inadequate facilities, makes it difficult for some of the health personnel to manage the disease as they would wish. This increases people's perception of the risk that they face with some patients.

Counselling

The general sequence in the counselling process for disease management involves pre-test counselling, testing, and post-test counselling, as indicated by all the medical personnel interviewed as the acceptable process. However, eleven out of the 13 physicians interviewed reported that if they had a patient they suspected to be HIV-positive, they first requested a laboratory test. They said this would be done without pre-test counselling or seeking consent; they argued that the person had come to them to seek treatment and that requesting a blood test was part of the treatment process as with any other disease. After the test, if the patient was HIV-positive, they would refer the patient for counselling before being informed of the test results. One said: 'The person has come to seek a cure and I am helping to do that; why should the management of HIV be different?'. Secondly, it was pointed out that given the stigmatization and the negative public image of HIV, requesting pre-test

¹There has been evidence of some suspected HIV-positive persons in Ghana giving wrong addresses for a variety of reasons. See for instance Awusabo-Asare and Agyeman 1993.

counselling raises suspicion and the patient may not concentrate on the treatment process or may go away and not return (see above). Therefore, it could also be useful to request a blood test without causing further anxiety to an already sick person or relation. Thirdly, because of the multiple roles played by the few trained counsellors in the system, referring a suspected patient to a counsellor who may be occupied with another job, or is sometimes unavailable, delays treatment.

Informing patients of their HIV status

Another issue discussed was the most appropriate person to inform a patient of his or her serostatus after a test. The general protocol is that a suspected HIV-positive person should have pre-test counselling. Where such a protocol is followed, the question of the 'appropriate' person to inform suspected HIV-positive patients of their serostatus does not apply. However, given the responses of some of the physicians that they skip pre-test counselling and request blood tests, the issue became pertinent.

While the physicians subscribed to the ideal situation of a trained counsellor informing the person, five of them indicated that they would inform the patient themselves if they requested the test. Their reason was that in Ghana patients have confidence and respect for medical officers and are therefore more likely to accept the test results from them.

Knowledge of counselling service

Although the physicians said that they could inform patients of their HIV status, eight out of the 13 admitted that they had no experience of professional counselling. Some of them also admitted having difficulty in breaking such news to patients. Within a period of two weeks before the survey, four HIV-positive persons had been diagnosed by some of the doctors. However, they did not use the services of trained counsellors although they knew that there was such a service, they knew where it was located, knew the counsellors personally and admitted that trained counsellors were needed to inform patients of their serostatus.

The results from the study raise a number of issues. The first is the observed skipping of pre-test counselling. As Sow and colleagues (1993) also observed, health workers in Africa are less likely to ask for permission or to request pre-test counselling before asking that a suspected HIV-positive person be tested. While it is necessary to counsel patients and assure them about HIV tests, and there are examples of successful AIDS counselling programs in Ghana (Ego and Moran 1993; Asamoah-Adu et al. 1994), it has not been possible to follow the ideal pattern in all cases. Secondly, there is an assumption that trained counsellors for HIV will function as full-time counsellors, but this has not been the case. Part of the problem is that HIV counselling has become an additional job for those who have been trained; and has also occurred in the absence of extra remuneration for them. Thirdly, counselling is physically and mentally taxing but in most cases there is no support system to help counsellors deal with their own emotions. This creates a problem for some of the health workers.

Confidentiality

A related issue is that of confidentiality to private information. Some countries expect that health workers will notify a body on seropositive results. But in others such as South Africa, notifiability is considered to be politically unwise and may affect the reporting of HIV cases at health centres (Slabber 1993). A further aspect is whether a health worker has the right to inform the discordant partner of a seropositive person who is not willing to inform his or her partner. Finally, there is the question whether a health worker can make a person's

serostatus known to other people if it is known that the person is deliberately infecting others.

In the study, the health care personnel were asked if they could inform a discordant partner if the infected person refused, after repeated counselling, to inform the partner. The responses of the physicians are: Yes, I will inform, 6; No, but..., 2; No, 5; Total, 13.

The reasons given for taking the responsibility to inform an uninfected partner were moral and professional responsibility; a matter of time since the partner may have already been infected; and the feeling that by not informing the partner they would not be doing the right thing, especially in the area of prevention. According to some of the physicians, the inability, in the name of confidentiality, to expose the activities of people who deliberately infect others puts everybody at risk including health care workers.

Among those responding 'no', the major reasons were professional ethics (owes a duty to the patient; has not got that privilege); it is easy to invite people for discussion particularly at the stage when they report at a hospital; and a good counsellor should persist till the patient agrees to inform the partner or gives permission for the partner to be informed.

Conclusion

Although the analysis has been done for only a few physicians who were interviewed, the views expressed are similar to those reported from other parts of sub-Saharan Africa and Latin America (Mkuye et al. 1991; Garcia et al. 1994). First, the general fear of infection given the nature of the working environment, the insufficient supply of basic items, and inadequate information about the serostatus of some patients, create a credibility gap and partly account for the high perceived risk of infection reported by some of the health workers.

A second observation is the gap between knowledge and practice among the health workers. Although they are aware of the basic precautions to avoid cross-infection, and of the process for counselling, yet they do not follow them in spite of their own observation that the disease poses a threat to them. There is also a lack of consensus among those interviewed on the issue of confidentiality. The dilemmas faced by some of the workers need to be recognized and discussed as part of the strategies for dealing with HIV.

It appears that some of the physicians face risks not only with the management of the disease but also with their own emotions. These aspects must be considered and tackled to create a healthy working environment for health workers. As many of them as possible need to be given training in counselling so that they will be able to provide support immediately when needed and also serve as support for the trained counsellors.

The conflicting responses from the physicians echo the general debate about safeguarding the rights of the individual and protecting the 'common good' for the majority (Gray, Lyons and Merton 1995). With the revelations from the Nuremberg Trial after the second world war and the attempt to associate health with human rights (Mann et al. 1994), there is now a growing interest in the rights of the individual within the context of health care. Some of the issues involved in HIV/AIDS infection and human rights have been taken up by the World Health Organization. For Ghana, the debate needs to be opened so as not to compromise the rights of the individual in the attempt to safeguard the common good.

References

- Aase, A. 1992. The changing geography of mortality in Norway, 1969-1989. Norsk Geografisk Tidsskrift 46:47-62.
- Addo-Yobo, E.O. and H. Lovel. 1992. Hospital users' knowledge about blood transfusion and awareness and attitudes towards HIV/AIDS infection in a region in Ghana. Journal of Tropical Pediatrics 38,2:94-95.
- Adelekan, M.L., S.O. Jolayemi, R.J. Ndom, et al. 1995. Caring for people with AIDS in a Nigerian teaching hospital: staff attitudes and knowledge. *AIDS Care* 7, Suppl. 1:S63-72.
- Ametewe, V.K. 1992. Youth and the knowledge and perceptions of AIDS and HIV infection: the case of some Ghanaian students. Paper presented at the Third National Seminar on AIDS, Accra, 15-16 September.
- Anarfi J.K. 1993. Sexuality. migration and AIDS in Ghana. Pp. 45-68 in Sexual Networking and HIV/AIDS in West Africa, ed. J. C. Caldwell et al. Supplement to Health Transition Review 3. Canberra: Australian National University.
- Anna, K., K. Kattsivo, L.N. Muthami, D.W. Lwafama and Ntsekhe. 1990. Knowledge, attitudes and practices on the acquired immune deficiency syndrome (AIDS) among health workers in (Nyeri) a district in Kenya. *Kenya Nursing Journal* 18,1:28-30.
- Asamoah-Adu, A., S. Weir, M. Pappoe, N. Kanlisi, A. Neequaye and P. Lamptey. 1994. Evaluation of a targeted AIDS prevention intervention to increase condom use among Ghanaian prostitutes. *AIDS* 8,2:239-246.
- Awusabo-Asare, K. and D.K. Agyeman. 1993. Social science research and challenge of the AIDS epidemic, Ghanaian data. Pp. 357-368 in *International Population Conference, Montreal*, 1993. Liège: IUSSP.
- Awusabo-Asare, K. and J.K. Anarfi. 1995. Social dimensions of HIV/AIDS in Ghana. Report submitted to the Swedish agency for Research Cooperation with Developing Countries. University of Cape Coast/University of Ghana.
- Caldwell, J. C., I.O. Orubuloye and P. Caldwell. 1994. Introduction. Pp. vii-x in Sexual Networking and AIDS in Sub-Saharan Africa: Behavioural Research and the Social Context, ed. I. O. Orubuloye, J.C. Caldwell, P. Caldwell and G. Santow. Canberra: Australian National University.
- Cohen, B. and J. Trussell. 1996. Preventing and Mitigating AIDS in Sub-Saharan Africa: Research and Data Priorities for the Social and Behavioral Sciences. Washington DC: National Research Council.
- Ego, M. and M. Moran. 1993. HIV/AIDS counselling program: a rural experience. Pp. 85-92 in Sexual Networking and HIV/AIDS in West Africa, ed. J.C. Caldwell et al. Supplement to Health Transition Review 3. Canberra: Australian National University.
- Garcia, M.L, J.L. Valdespino, M.M. Palacios, J.A. Izazola and J. Sepulveda. 1994. Education of Mexican health personnel on AIDS. *Boletin de la Oficina Sanitaria Panamericana* 117,3:213-219.
- Ghana. 1994. Ghana Demographic and Health Survey, 1993. Accra: Ghana Statistical Service
- Gray, J.N., P.M. Lyons and G.B. Merton. 1995. Ethical and Legal Issues in AIDS Research. Baltimore: Cambridge University Press.
- Kaimenyi, J.T. and F.L. Ndung'u. 1994. Knowledge, practices and attitudes towards HIV positive and AIDS patients among dental auxiliaries. *East African Medical Journal* 71,5:304-310.

Kubler-Ross, E. 1970. On Death and Dying. New York: Macmillan.

- Li, V.C., S. Clayton, C.Z. Chen, S.Z. Zhang, G.J. Ye and M. Guo. 1992. AIDS and sexual practices: knowledge, attitudes, behaviours and practices of health professionals in the People's Republic of China. AIDS Education and Prevention 4,1:1-5.
- Mann, J., M.L. Adelekan, S.O. Jolayemi et al. 1994. Health and human rights. *Health and Human Rights* 1,1:6-23.

Mann, J. and D. Tarantola. 1996. AIDS in the World II. New York: Oxford University Press.

- Mkuye, M., G. Nyembela, G. Lwihula, J. Mtui, A. Nocoll and U. Laukamm-Josten. 1991. Knowledge, attitudes and practices concerning AIDS among Tanzanian health workers. Pp. 15-16 in Epidemiology and Control of Communicable Diseases in Tanzania. Proceedings of the 8th Annual Scientific Conference, Dar es Salaam, 14-17 November 1989. Dar es Salaam: Tanzania Public Health Association.
- Omran, A.R. 1971. The epidemiological transition theory: a theory of the epidemiology of population change. *Milbank Memorial Fund Quarterly* 49:6-47.
- Slabber, C.F. 1993. Notifiability of HIV and AIDS (letter). South African Medical Journal 83,1:58-59.
- Sow, P.S., R. Colebunders, Y. Pleerackers and E. Katabira. 1993. Attitudes among health care workers (HCW) concerning the clinical management of persons with HIV infection in developing countries. *International Conference on AIDS* 9,2:721 (abstract no. Po-C18-3026)
- Walrond, E.R., F. Jones, M. Hoyos, T. Roach and H. Ellis. 1992. KAP survey of health science students in Barbados. In A Portfolio of AIDS/STD Behavioral Interventions and Research, ed. L.S. Bond. Washington DC: Pan-American Health Organization.