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## **NATIONAL CAPACITY BUILDING FOR CHILD SURVIVAL AND DEVELOPMENT:**

### **A SITUATION ANALYSIS OF NCB/CSD-RELATED RESEARCH AND TRAINING ACTIVITIES IN UGANDA OCTOBER 1992**

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**A PROJECT OF THE AFRICAN UNIVERSITY CONSORTIUM FOR  
NCB/CSD,  
UNICEF AND THE CHILD HEALTH AND DEVELOPMENT CENTRE,  
MAKERERE  
UNIVERSITY.**

#### **BACKGROUND:**

The initiative for the National Capacity Building for Child Survival and Development project began in 1987 as a response to two major constraints to sustainably implementing CSD activities. The limiting issues were lack of skilled personnel on the ground in developing countries and insufficient linkages between locally available resources, including persons in Communities, Universities, and Governments at all levels. Following two years of exploratory work, NCB/CSD activities were initiated in 1988 in Kenya and 1989 in Uganda.

University teams were assembled and they began working with Government representatives and specific Communities to address local CSD topics. Other countries that also developed NCB/CSD initiatives were Nigeria, Ethiopia, and Cameroon.

At the Second African Regional Workshop on NCB for CSD held in Ibadan, Nigeria in October, 1990, the workshop participants strongly emphasized the need for information and experience exchanges among all the countries involved in the initiative. These exchanges were deemed essential to meeting the objectives of the NCB/CSD strategy.

In April, 1991, at a Consultative Meeting for NCB/CSD, the concept of an African University Consortium (AUC) was first raised and discussed as a means to implement the desired information exchanges, as well as providing support to the NCB network. A follow-up meeting was held in July that year in Uganda for the AUC Planning Task Force, at which time many details of the AUC were worked out and it was officially established. The purpose of the organization was to effect an association of Universities concerned with the development of Community-based, action-oriented programmes of research and interventions designed to improve the health and well-being of children, mothers and other vulnerable populations.

After evolving these objectives, the Task Force Meeting decided to carry out a Situation Analysis of CSD-related research and training activities in the

participating NCB countries.

The intent of the study was to gather background information on needs, resources and constraints that could be used to better target local resources as well as planning for regional collaborative activities. Very little information is currently available and none is systematically organized that describes all University-linked research and training activities in CSD at national, regional or continental levels.

#### OBJECTIVES:

The overall aim of this study was to develop a base for African multi-country collaboration that will support African capacity building for CSD.

The study itself was intended to be a preliminary collaborative exercise and preview some of the issues in such an approach for the consortium.

Specifically, the study has the following objectives:  
a Prepare an inventory of activities, needs, resources, and constraints at University and national levels for CSD-related operational research and training.

b. Use the collected information and documents to build for the shared use  
of African and other universities.

c. Use the inventory and database to collectively prepare a meta-analysis of regional and African needs and resources for improving national capacities to sustain CSD.

d Make specific recommendations for follow-up actions and multi-country collaborative research projects. (from draft Situation Analysis proposal, 16/10/91)

#### METHODOLOGY:

Design - The study design was descriptive and retrospective, with information requested from the present back to 1989 when NCB was first developing in Uganda. In the absence of a comprehensive list of agencies involved in CSD or NCB for CSD activities, the principal investigators identified over 100 organizations and individuals to initially approach for their responses to an open-ended semi-structured questionnaire. Willing informants were interviewed at their convenience and then asked for additional potential respondents, i.e., snowball sampling. Emphasis was placed on interviewing persons who had direct experiences with CSD-related research, training, or University capacity building activities. Data collection also included a limited records review where research or training documents were readily available.

The investigators talked with 180 individuals, representing over 100 government agencies, university units or departments, and NGOs. The informants came from all levels of the organizations, from students to department heads, from trainers to project managers. Information was obtained about a total of 320 CSD activities completed from 1989 onwards or currently in progress; of these, 200 were mostly research and 120 were primarily training.

#### RESULTS:

CSD-related research activity has been increasing dramatically year by year in the past three years. Comparing the present situation with recollections

of local researchers about the previous decade, there is now a very substantial increase in the diversity and numbers of activities, of individuals, and of groups/sectors/departments involved in such research.

CONCLUSION:

There is still an urgent need for Resource for NCB/CSD research and training. It was emphasized that not only the international donors should do this but also the Government and the University. There is need for greater intersectoral collaboration between the various human resources existing within the Community, Government and the University. The facilities available such as libraries, computers, vehicles need to be improved. The support in whatever way should improve NCB/CSD activity involvement. This could be done through prioritization, Networking especially between departments and dissemination of information.

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KNOWLEDGE, ATTITUDE, PRACTICE AND BELIEFS OF MEDICALLY TRAINED PERSONNEL REGARDING AIDS/HIV INFECTION IN FOUR RURAL HOSPITALS IN EASTERN UGANDA.

LOCATION: TORORO AND IGANGA DISTRICTS

DR. NDOLERIIRE S. MICHAEL

SUPERVISOR: PROFESSOR JOHN ROSS, FCCFP.,

TECHNICAL ADVISOR: DR. TOM BARTON M.D.,

#### STATEMENT OF THE PROBLEM:

Acquired immunodeficiency Syndrome (AIDS) has developed into a global epidemic (Mann, 1987). Uganda an East African country with a population of 16 million people, was one of the first countries in Africa to recognise the AIDS problem (Serwadda, 1985).

In Uganda today over 1.5 million people are estimated to be infected with HIV. 33971 AIDS cases have been officially reported to the AIDS Control Programme (ACP) by the 31st June 1992 of which 91.8% are adults and 8.2% children. Because of under reporting, delays in reporting, under recognition and the fact that some patients do not go to health units for various reasons this just shows the tip of the iceberg. HIV/AIDS affects men, women and children, professionals, rich and poor without discrimination but the most unfortunate feature of this epidemic is that over 80% of the affected victims are between 15- 45 years who are most active and productive economically. It is estimated that the actual number could be 5 to 7 times higher. Great emphasis continues to be placed on surveillance of HIV infection. This is a better indicator of the magnitude of the problem as well as monitoring trends in HIV infection since AIDS cases show us infection that occurred years back (AIDS Surveillance report 1992). AIDS has produced three related world-wide epidemics namely a) HIV infection b) AIDS and c) social, cultural, economic and political reactions and responses to the first two epidemics. The first epidemic began in the early 1970's as the silent pandemic of HIV infection. It continues today and further spread is inevitable. It is therefore not only a health problem but is also a social, economic and political nightmare (ACP).

#### GENERAL OBJECTIVE

To establish the knowledge, attitudes and practices of medical personnel in relation to cause, mode of transmission, prevention and control and management of HIV/AIDS infected patients.

#### SPECIFIC OBJECTIVES

- (i) Assess knowledge base of formally trained medical personnel about causes, modes of transmission and hazards of HIV/AIDS disease.
- (ii) To determine the facilities and materials available in the management of suspected HIV/AIDS patients by health care personnel.
- (iii) To determine attitudes of health care personnel towards patients undergoing treatment for HIV/AIDS infection.
- (iv) Evaluate the practices of medical personnel in self protection during care of HIV/AIDS infected persons.

#### SIGNIFICANCE

AIDS is a serious illness, one that is both contagious and fatal. The reaction of health care workers has been complex, controversial and emotionally charged. As countries struggle (Uganda, in particular) to develop guidelines and policies, there is little systematic research on the effects of AIDS on the health care workers attitudes and practices. Important decisions are thus made in the absence of reliable information. It is hoped that this study will provide

some of the missing information.

## LITERATURE REVIEW

AIDS is caused by the Human Immunodeficiency Virus (HIV). This viral infection is transmitted through sexual relations, blood transfusion or from mother to child around the time of birth and the use of unsterile surgical instruments and needles. Once in the body, the virus infects and destroys the cells which control the body's immune system. This causes the body to lose its resistance to many common and uncommon infections which cause most of the problems of patients with AIDS. Many of these infections are preventable with commonly used and available drugs (Katabira, 1989).

The risk of HIV infection in laboratory workers following percutaneous needle-stick exposure to HIV contaminated blood is estimated to be between 0.13% and 0.5% (WHO AIDS series NO. 9 1991). The magnitude of the hazard to health workers exposed to HIV infected patients has not been estimated. However, they are exposed to contamination of the hands and mucous membranes of the eyes, nose and mouth by infections including HIV from blood and other body fluids. Knowledge, attitudes and practices towards these impending dangers may prove beneficial in avoiding further spread of HIV infection.

The rapid spread of the Immunodeficiency virus throughout the world has meant that health workers are now routinely handling material that is potentially infected with HIV. While the risk of infection from such material is very low, health workers need to be aware of the appropriate safety precautions and ensure that they are applied to all procedures that are carried out. (WHO AIDS series No. 8, 1990). During a surgical operation or resuscitation of a critically ill patient the thoughts of the operator are usually focused on the task at hand.

Unless there has been a reason to suspect infection in the patient the possibility of exposure to HIV and other blood borne viruses may not be prominent in the minds of surgeons, dentists, anaesthetists, or other staff participating in the procedure. (Jefferies, 1992).

The number of recorded AIDS cases is frightening. By the end of December 1991 Kampala district had 7415 reported cases, Masaka 4021, Mpigi 1929, Gulu 1381, Rakai 1343, Luwero 951, Tororo 646, Iganga 299, Pallisa 6 (AIDS Control Programme report, December 1991). As the AIDS crisis rolls across the country a huge problem of widows and orphans is created in all districts without exception (Sengendo, 1991).

Although a national control programme for AIDS has been in existence since early 1987 few data are available on health workers' knowledge of and attitudes towards AIDS or their practices. The study is intended as an initial baseline survey in the study population.

It is generally accepted that until a vaccine or biochemically effective therapy for AIDS is discovered the only practical tool available to stop the spread of AIDS is behavior change through information and counselling. Education campaigns aimed at changing or modifying behaviors among health care workers as well as promoting the recruitment of new practitioners and support programs designed to alleviate worker

stress and burnout are of central importance in National efforts against AIDS. The success of educational initiatives for health care workers depends on their ability to identify and meet the information and psychosocial needs of various care worker populations and to address them in ways that are culturally acceptable and individually relevant (Taylor, 1990).

AIDS in Africa, and most certainly in Uganda must be viewed in the context of overstrained social services. Traditional medical facilities, hospitals and medical staff are few and far between. Knowledge concerning the disease is scanty and unfounded fears are rampant among medical staff (S. Kalibala and N. Kaleeba, 1989).

Knowledge of AIDS and beliefs about AIDS prevention are relevant to reducing HIV infection. In a study of sexual risk behavior AIDS knowledge and beliefs about AIDS among runaways it was found that while most (65%) had been sexually active during the previous three months; the rate was not different from the percentage of a comparable sample of high school students who had been sexually active in the previous months (58%) (Rotheram-Borus and Koopman, 1991).

Although condom use was relatively inconsistent, again it was not different from condom use among adolescents in general. Sexually active runaway girls typically reported only one partner in the past 3 months. Furthermore, runaways' moderate high knowledge and positive beliefs about AIDS prevention were similar to those of high school samples.

In both Africa and Asia, HIV infection is sufficiently extensive in the general population to create concern over the demographic and economic consequences in the coming decades. To assess the demographic impact of AIDS in the worst-afflicted regions of the world, we must develop models that combine descriptions of HIV spread and population growth.

One example concerns the patterns of mixing between men and women with high and low rates of sexual-partner change. The simplest of models-based on the stratification of the population by sex and classes of sexual activity - illustrates well the significance of sexual contact networks.

When high-activity men (such as migrant male labourers in urban centers) have greatest contact with high activity women (wives or girlfriends), a multiple epidemic may occur. First comes a rapidly developing epidemic in the small proportion of high-activity men and women. A more slowly developing, but more larger, epidemic follows the initial outbreak. The second epidemic involves the low-activity men and women who constitute the majority of the population. The epidemic in the high-activity classes may be separated by a decade or more.

The scenario predicted by the simple model reflect what is actually occurring in cities such as Nairobi. Their levels of infection are high in female prostitutes (69 to 80%), moderate to high in their male clients (20 to 40%) and low in pregnant women in the general population (5 to 6%). The model suggests that

the low levels in the general population will rise over the coming decade. This increase will herald a second and much larger epidemic, similar to what has already happened in the cities of Malawi, Tanzania and Uganda, (Anderson, 1992).

Available facts indicate that in the absence of major changes in behavior or the development of better drugs, AIDS is likely to cause serious demographic changes in some African countries over the coming decades.

What can be done to reduce the spread of infection? Models that assess the influence of behavioral changes on the rate of advance show the importance of the timing of these changes. The effects of timing are not necessarily intuitively obvious, given the non-linear character of the epidemic. Changes introduced early in the course of the epidemic have a disproportionately greater effect than similar changes introduced later. As a consequence, significant resources should be directed toward inducing behavioral changes to try to prevent a widely disseminated lethal epidemic some 10 to 20 years from now.

Targeting education and condom distribution at high-risk groups will always be beneficial in the early years of the epidemic when the infection in the general population is limited. Such a policy would clearly be beneficial in countries, such as Nigeria where levels of HIV infection in high-risk groups such as female prostitutes and their male clients are low to moderate and the levels are very low in pregnant women. If mixing patterns are highly assortative, an approach aimed at high-risk groups is particularly worthwhile. It may even turn out that the rates of sexual-partner change in the general heterosexual population are insufficient to maintain the transmission of HIV. If infection has taken hold to a significant degree within lower-risk groups, however, as is the case in Malawi, Tanzania and Uganda, education and condom distribution must be gained by focusing efforts on young teenagers before they become sexually active (Anderson, 1992).

#### METHODOLOGY

The study is proposed to be carried out in Tororo, St. Anthony's and Busolwe Hospitals in Tororo district as well as Bugiri in Iganga district. Busolwe is located 45 km to the Northwest while Bugiri is located 35 km to the southwest of Tororo town. Bugiri Hospital is 37 km to the south of Busolwe hospital while St. Anthony hospital is situated within Tororo municipality. These were selected because:-

- i) They are within easy and manageable travelling distance from each other
- ii) Two of them namely Tororo and St. Anthony hospital are semi-urban while the other two (Busolwe and Bugiriri) are rural. The first two have fully established AIDS care clinics while the latter two have none. It is anticipated that differences in management of HIV/AIDS patients exist within the two categories.

The study population will include:

- i) Administrators



- ii) Doctors
- iii) Registered Nurses and Midwives
- iv) Enrolled Nurses and midwives
- v) Medical Assistants
- vi) Anaesthetic Assistants
- vii) Dressing and Nursing Aides

These categories of people are all involved in the handling of HIV/AIDS patients. They have had a minimum of 3 years formal medical training during which they should have attained a level of knowledge sufficient to enable them to understand the nature and importance of the HIV/AIDS problem.

The main ethnic groups in Busolwe and Bugiri are Banyole, Samia and Basoga respectively. In the Tororo area there are quite a number of ethnic groups mingled together and these include Adhola, Samia, and Itesot. The research design is a cross-sectional descriptive study assessing knowledge, attitude, practice and beliefs of medically trained personnel in the four named hospitals. The specific strategies for data collection include:

- a) Focus group discussion using a semi-structured topic guide.
- b) Field study using individual interviews with the guidance of a pre-determined, pre-tested questionnaire.

A: FOCUS GROUPS: The groups to be involved in the discussions include:-

- i) The different health managers responsible for the different categories of medical personnel.
- ii) Medical personnel from the different categories in the four hospitals.

These focus groups will assess the main beliefs of medically trained personnel in their areas. They will focus on the practices and attitudes towards health care delivery and review the hazards that may be encountered during their day-to-day activities. During focus group discussions health managers will be kept separate from other cadres of health care personnel. Each focus group will consist of 6-10 participants. In all 8 focus groups will be held; 2 in each hospital. It is anticipated that each focus group will last 1 to 1 1/2 hours not including mobilization time. Two moderators will be present at each session; one to lead the discussion and the other to do the observation and recording. Permission will be sought to tape record them for more extensive, subsequent analysis involving the principal investigator, the technical advisor and supervisor. The sessions will be semi-structured relying on general open-ended questions which may be followed by specific probes or prompts as needed.

B: FIELD SURVEY:

In the pre-visit, Health managers estimated an average of 50 medically trained personnel for the named categories in each of the four hospitals. This gives approximately 200 medically trained personnel in the study areas.

SAMPLE SIZE:

The sample size of the population for the study will be obtained using the KISH formula.

$$Z = 1.96 = 95\% \text{ confidence level.}$$

P = 0.5 estimated proportion of the population likely to participate in the study

E = 0.1 desired level of precision.

N = 100

#### SAMPLING PROCEDURE

The convenience sampling procedure will be used.

Pre-testing of the data collection methods will be done in Nsambya hospital. This will help in determining the acceptability of the questionnaire in relation to the questions asked. It will also assist in determining the willingness of the medical personnel to answer the questions and collaborate in the study.

Assessment of the time required for administration of the questionnaire will be done. This will help further in the revision of the format and presentation of the questions for clarity. Further pre-coding of responses will be done and alterations between open and closed ended questions will be performed. The need for additional instructions for the administration of the questionnaire will be determined.

#### QUALITY CONTROL/DATA MANAGEMENT

Interviewers will be people of integrity, other than health managers of the different categories, selected from the nearby schools. A pre-requisite will be a sound knowledge of the English language. Training of the interviewers will be done prior to the actual field survey. Interviewers will be mature, sensitive listeners and known to the hospital community. Training sessions will emphasise respect and avoiding stigmatization of the respondents. All information obtained will be taken in strict confidentiality. Further modification of the questionnaire will be possible at the time of training and later in the field as the need arises although it is hoped this will be minimal.

Focus group discussion will be guided by the format outlined in the focus group guide. It may at times be necessary to use probing questions in order to elicit the exact position of the respondent on the issue at hand in the discussion. It will be important for the interviewers at the end of each interview to check for completeness.

Questionnaires will be edited at the hospital of interview at the end of the day so as to obtain clarity and correct any mistakes present. At the end of the data collection exercise, coding of the data and data entry into a micro-computer will be done with the assistance of a data entry clerk.

Full data analysis will be done by the principal investigator at the conclusion of the data collection and entry by the use of frequency tables, cross tabulation which would be evaluated by means of the chi-square test in association with Epi-Info and Ask-SAM base software. Continued consultation with the technical advisor and supervisor will be done during data analysis and write-up periods.

Medical Superintendents, Administrators and participants in the four hospitals will be informed

prior to the beginning of the survey so as to obtain maximum co-operation from all those involved.

#### TIME TABLE

Preparation of the study will be done between the months of September to November 1992 with an aim of completing preliminaries of the proposal layout and registration of the study with the National Research Council. Preparation will also include obtaining approval to carryout the study from the University Select Committee for Proposal Review and the Higher Degree Committee. A search for funding will also be done at completion of the proposal approval.

#### ORGANISATIONAL PLAN

	Preparatory Phase September–November 1992																			
	DEC 1992				JAN 1993				FEB 1993				MAR 1993				APR 1993			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Pretesting	x	x																		
Training staff			x																	
Field work					x	x	x													
Data entry and analysis									x	x	x									
Consultation on findings											x		x	x	x	x			x	
Final write up and dissemination													x		x	x	x	x		x

#### ETHICAL CONSIDERATIONS

During preparatory phase of the study, information about the research will be communicated to the District Medical Officers and District Administrators' offices in Tororo and Iganga respectively. Prior to the actual data collection, permission to carryout the research at the different hospitals will be obtained from the respective Medical Superintendents. Letters of introduction from the University and the Department of Community Practice will be obtained and presented to all the administration levels stated above. The District Medical Officers will be requested to provide a letter of authorization allowing the study to be carried out in Tororo and Iganga.

Interviewers will be expected to give a brief statement about the nature of the study and give assurance of confidentiality for all information obtained. Explanation will be given to the participants (subjects) that participation in the study is voluntary and they are free to withdraw at any time during the study.

Data collected will be treated in strict confidentiality by the principal investigator, technical advisor and supervisor. The secretary will also treat all information as strictly confidential. The Uganda National Council for science and Technology will also be informed, and permission will be obtained after registration of the research done.

#### LIMITATION OF THE STUDY

Focus group discussions and interviewers' training session will be carried out in 3 different locations at the various hospitals. A limitation would be the possibility of disrupting the work schedules of the participants involved. This also necessitates the principal investigator to move from one place to another a situation that may cause unforeseen difficulties, e.g., failure to obtain transport and subsequent missing of a session. This is a small study

conducted in one corner of the country, the findings may not reflect the general picture countrywide. The researcher is a novice handling a very sensitive topic a situation that may result into bias. Non-probability samples are never truly representative tending to overselect some population elements and underselect others.

There is also a possibility of having refusals to participate in the study owing to inadequate information about the study. Having been imparted on the participants. Cross-sectional surveys can only elicit verbal reports and are open to both deliberate falsification and unintended distortion. Only long term observations over time can confirm if verbal statements are true indicators of complex behaviors such as refusal to care for patients with HIV/AIDS, stress and professional burnout.

## DISSEMINATION OF RESULTS

Dissemination of results after data analysis and writeup will be to:

- a) Uganda AIDS Commission
- b) The Ministry of Health Headquarters Entebbe for the attention of Director AIDS Control Programme
- c) District Medical Office, Tororo and Iganga Districts
- d) A copy will be given to Makerere Medical School Library and to the Department of Community Practice library.
- e) A copy will be sent to the funding agency
- f) A personal copy will be given to my Technical Advisor and Supervisor Dr. Tom Barton and Professor John Ross respectively
- g) A copy each will be given as a feed-back to the study population in the four hospitals
- h) A copy will be given to the AIDS Support Organisation (TASO)
- i) A copy will be submitted as a dissertation for partial fulfilment for the award of the Degree of Masters of Medicine, Community Practice.

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diagnostic and Research Laboratories working with HIV:  
N0.9 pp 1 1991.

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TITLE: KNOWLEDGE, ATTITUDE, PRACTICE AND BELIEFS OF HEALTH PERSONNEL REGARDING MOSOCOMIAL AIDS/HIV INFECTION IN FIVE HOSPITALS IN EASTERN UGANDA.

LOCATION: TORORO, IGANGA AND MBALE DISTRICTS

PRINCIPAL INVESTIGATOR: DR. NDOLERIIRE S. MICHAEL

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SUPERVISOR: PROFESSOR JOHN ROSS, FCCFP., HEAD OF DEPARTMENT OF COMMUNITY PRACTICE, P.O.BOX 988, TORORO.

TECHNICAL ADVISOR: DR. TOM BARTON M.D., CHILD HEALTH AND DEVELOPMENT CENTRE, MAKERERE UNIVERSITY, KAMPALA.

ESTIMATED DURATION OF STUDY: 6 MONTHS

ESTIMATED BUDGET: 2,112,650/=

DATE: 1ST JANUARY, 1992.

#### ABSTRACT.

(Acquired Immuno-deficiency Syndrome) AIDS is a global health problem of seemingly insurmountable proportions. It is a serious illness, one that is both contagious and fatal. The reaction of health care workers has been complex, controversial and emotionally charged. As countries struggle (Uganda, in particular) to develop guidelines and policies there is little systematic research on the effects of AIDS on the health care workers' attitudes and practices.

This study proposes to assess the knowledge, attitude, practice and beliefs of health care workers. It will assist in assessing the effect and impact of existing training programmes with an aim of contributing to areas of curricula which seem to be most deficient and least understood. The study is a descriptive cross-sectional study. It aims at determining the knowledge, and attitudes and beliefs or the actual practices of health care workers in two rural and three semi-urban hospitals in eastern Uganda. Specific strategies to be employed include use of focus group discussions and a field survey using a semi-structured questionnaire and semi-structured focus group topic guide with open-ended questions. Data analysis will be done by the principal investigator with the assistance and use of micro-computers and the Epi-Info and Ask-Sam software packages.

Dissemination of results after the completion of the write-up will include: The Uganda AIDS Commission, to the study population in the five hospitals, and the Tororo, Iganga and Mbale District Medical Officers.

#### BACKGROUND INFORMATION:

Acquired Immuno-deficiency Syndrome (AIDS) has developed into a global epidemic (Mann, 1987). Uganda, an East African country with a population of 16 million people, was one of the first countries in Africa to recognize the AIDS problem (Serwadda et al, 1985).

In Uganda today over 1.5 million people are estimated to be infected with HIV. By 31st July 1992, 33971 AIDS cases have been officially reported to the AIDS Control Programme (ACP), of which 91.8% are adults and 8.2% children. Because of under-reporting, delays in reporting, under-recognition and the fact that some patients do not go to health units for various reasons, this just shows the tip of the iceberg. HIV/AIDS affects men, women and children, professionals, rich and poor without discrimination. The most unfortunate feature of this epidemic is that over 80% of the affected victims are between 15-45 years i.e., there who are most active and productive economically. It is estimated that the actual number of AIDS cases could be 5 to 7 times higher than the number officially reported.

Surveillance of HIV sero-prevalence is a better indicator of the magnitude of the problem as well as monitoring trends in new HIV infection; AIDS cases show us infection that occurred years back (AIDS Surveillance report 1992).

AIDS has produced three related world-wide epidemics: a) HIV infection; b) AIDS; and c) social, cultural, economic and political reactions and responses to the first two epidemics. The first epidemic began in the early 1970's as the silent pandemic of HIV infection. It continues today and further spread is inevitable. It is therefore not only a health problem but is also a social, economic and political nightmare (ACP).

#### STATEMENT OF THE PROBLEM:

Health personnel report high levels of stress as a result of caring for AIDS patients (Odonnell, et al 1987; Klonnoff and Ewers, 1990). Stress reduces work performance and therefore the quality of care offered. Another concern is that AIDS is likely to influence career objectives of health personnel. There is already under-enrollment in many of the physician specialities associated with HIV treatment in the USA (Presidential Commission Report 1988). It is possible that some potential students will avoid the medical profession and select other jobs due to fear of contracting AIDS as health workers. Again this implies reduced personnel and therefore reduced quality of service offered to AIDS patients.

Limited literature exists on how AIDS has influenced the health system. According to Okello, D.O; (1992) "the average cost of all the services provided for each in-patient is Ug. Shs. 22,586/= per hospitalization. In the out-patient clinic, the mean cost of care per patient for clinic visit is Ug. Shs 5,752/= . However, no effort was made to separate AIDS-related cost of care from costs of other services provided to patients with AIDS (OKELLO, D, O. 1992). Baguma (1992) argues that in assessing the costs of AIDS there is need to focus on health care workers because they form an important structure of the health system.

A major concern is that the AIDS scourge is influencing the nature and quality of health care given through occupational transmission (Veleem et al, 1991). The literature indicates that so far 34 doctors have died from AIDS in tropical Africa. All of these doctors were infected through pricks or contact with patients body fluids, especially infected blood. In Uganda, AIDS was found to be the third major cause of recorded death among doctors, probably due to non-occupational acquisition (Jagwe 1987). Even in the educated group, misconceptions regarding HIV transmission, including occupational risk, were high and many continue to be at risk from their sexual behaviour. Death of doctors from AIDS means that fewer of them will be available to care for the AIDS patients and others will be scared of dealing with AIDS patients. Fears of occupations exposure to HIV were high, as 43% believed the virus could be passed on by nursing an infected patient.

Attempts to comprehend physicians' extreme reactions to AIDS have met with great difficulty. Because AIDS embodies the most hazardous characteristics of a number of diseases, physicians' response to the disease has been similar to, and different from their response to other disorders. However, owing to the unique configuration of AIDS disease characteristics, there is no precedent of "appropriate physician response" for doctors to follow. As doctors grapple with the problem of dealing with AIDS and the risk of AIDS, traditional norms and assumptions are being questioned (Taylor,1989).

#### GENERAL OBJECTIVE

To establish the knowledge, attitudes and practices of medical personnel in relation to cause, mode of transmission, prevention and control and management of HIV/AIDS infected patients.

#### SPECIFIC OBJECTIVES

(i) Assess knowledge base of specific personnel about nosocomial modes of transmission and personnel/professional hazards of acquiring HIV/AIDS disease.

(ii) To determine attitudes of health care personnel towards patients undergoing treatment for HIV/AIDS infection and related opportunistic conditions.



(iii) Evaluate the nature and persistence of practices of medical personnel in self-protection during care of HIV/AIDS infected persons.

#### SIGNIFICANCE

AIDS is a serious illness, one that is both contagious and fatal. The reaction of health care workers has been complex, controversial and emotionally charged. As countries struggle (Uganda, in particular) to develop guidelines and policies, there is little systematic research on the effects of AIDS on the health care workers' attitudes and practices.

Important decisions on how to deal with AIDS are thus made by governments and planners of health care systems in the absence of reliable information. It is hoped that this study will provide some of the missing information.

#### LITERATURE REVIEW

AIDS is caused by the Human Immuno-deficiency Virus (HIV). This viral infection is transmitted through sexual relations, blood transfusion, from mother to child around the time of birth or through the use of unsterile surgical instruments and needles. Once in the body, the virus infects and destroys the cells which control the body's immune system. This causes the body to lose its resistance to many common and uncommon infections which cause most of the problems of patients with AIDS. Many of these infections are preventable with commonly used and available drugs (Katabira, 1989).

The magnitude of the hazard to health workers exposed to HIV infected patients has not been estimated. However, they are exposed to blood and body fluid contamination, of the hands and to the mucous membranes of the eyes, nose and mouth. The risk of HIV infection in laboratory workers following percutaneous needle-stick exposure to HIV contaminated blood is estimated to be between 0.13% and 0.5% (WHO AIDS series NO. 9 1991).

The rapid spread of the Immuno-deficiency virus throughout the world has meant that health workers are now routinely handling material that is potentially infected with HIV. While the risk of infection from such material is very low, health workers need to be aware of the appropriate safety precautions and ensure that they are applied to all procedures that are carried out. (WHO AIDS series No. 8, 1990). During a surgical operation or resuscitation of a critically ill patient, the thoughts of the operator are usually focused on the task at hand. Unless there has been a reason to suspect infection in the patient, the possibility of exposure to HIV and other blood-borne viruses may not be prominent in the minds of surgeons, dentists, anaesthetists, or other staff participating in the procedure (Jefferies, 1992).

The number of recorded AIDS cases is frightening. By the end of December 1991, Kampala district had 7415 reported cases, Masaka 4021, Mpigi 1929, Gulu 1381, Rakai 1343, Luwero 951, Tororo 646, Iganga 299, Pallisa 6 (AIDS Control Programme report, December 1991).

Although a national control programme for AIDS has been in existence since early 1987, few data are available on health workers' knowledge of and attitudes towards AIDS or their practices. The study is intended as an initial baseline survey in the study population.

It is generally accepted that until a vaccine or biochemically effective therapy for AIDS is discovered the only practical tool available to stop the spread of AIDS is behavioural change through information and counselling. Education campaigns aimed at changing or modifying behaviours among health care workers as well as promoting the recruitment of new practitioners and support programs designed to alleviate worker stress and burnout are of central importance in national efforts against AIDS. The success of educational initiatives for health care workers depends on their ability to identify and meet the information and psychosocial needs of various care worker populations and to address them in ways that are culturally acceptable and individually relevant (Taylor, 1990).

AIDS in Africa, and most certainly in Uganda, must be viewed in the context of overstrained social services. Medical facilities, hospitals and medical staff are few and far between. Knowledge concerning the disease is scanty and unfounded fears are rampant among medical staff (Kalibala and Kaleeba, 1989).

Uganda has embarked on a massive AIDS educational programme. This programme has been implemented through the mass media, seminars, talks conferences, churches, resistance councils and the NGO's. However, the effectiveness of the programme in terms of bringing about increased knowledge, sexual behaviour change, and desirable (safe) attitudes has not yet been established, (Moodie et al, 1991).

So there is a paucity of research on health workers attitude to AIDS, on which education programmes could be based (Baguma 1991).

Medical students' attitudes and resulting behaviours about treating HIV-infected patients are critical and will become increasingly so in the years ahead. During a survey of AIDS-related stigma, personal risks and career objectives among Makerere Medical Students Baguma (1992) found that 71% of the students, perceived themselves to be at the risk of HIV infection because of their profession. The major special occupational hazards reported included needle pricks 42%; contact with body fluids, especially blood 40%; lack of protection of other diseases 4%. Another 4% of the students stated that attending to AIDS patients was a hazard in its own right (Baguma 1992).

A study in the USA looked at first year medical students' attitudes and knowledge about AIDS; information about knowledge of HIV transmission, concerns about contracting HIV, ethical and legal responsibilities, attitudes about testing of HIV and treatment of HIV infected patients, the effect the epidemic poses for their medical careers, changes in personal sexual and drug use practices (Strunin et al, 1989).

Results indicated that students' careers are being affected because they are worried about contracting HIV, the epidemic is affecting their final choice of specialty, and they believe they should be allowed to refuse to treat AIDS patients during their medical school training. The findings raise serious questions concerning why medical students hold these beliefs and suggest that students' willingness to care for AIDS patients may be a

function of their level of knowledge and understanding of HIV infection and the disease AIDS. The results have implication for curriculum reform to address the AIDS crisis.

Anderson (1992) asks: What can be done to reduce the spread of infection? Models that assess the influence of behavioral changes on the rate of advance show the importance of the timing of these changes. The effects of timing are not necessarily intuitively obvious, given the non-linear character of the epidemic. Changes introduced early in the course of the epidemic have a disproportionately greater effect than similar changes introduced later. As a consequence, significant resources should be directed toward inducing behavioral changes to try to prevent a widely disseminated lethal epidemic some 10 to 20 years from now.

Targeting education and condom distribution at high-risk groups will always be beneficial in the early years of the epidemic when the infection in the general population is limited (Anderson 1992)).

Such a policy would clearly be beneficial in countries, such as Nigeria where levels of HIV infection in high-risk groups such as female prostitutes and their male clients are low to moderate and the levels are very low in pregnant women. If mixing patterns are highly associative, an approach aimed at high-risk groups is particularly worthwhile. It may even turn out that the rates of sexual-partner change in the general heterosexual population are insufficient to maintain the transmission of HIV.

If infection has taken hold to a significant degree within lower-risk groups, however, as is the case in Malawi, Tanzania and Uganda, education and condom distribution must be gained by focusing efforts on young teenagers before they become sexually active (Anderson, 1992).

Konde-Lule, et al (1989) found that condom use was minimal. Only 106(3%) of a total of 3722 respondents had ever used a condom. Of these 41(39%) claimed to use them frequently. Of the 1718 people who gave reasons why they did not use condoms, 903(53%) said they had no particular reason, 527(31%) said that they did not like them, 273(16%) said that it was too difficult and only 15(1%) said that they were too expensive (Konde-Lule, et al 1989).

#### METHODOLOGY

The study is proposed to be carried out in Tororo, St. Anthony's and Busolwe Hospitals in Tororo district as well as Bugiri in Iganga district in addition to Mbale Hospital in Mbale district. Busolwe is located 45 km to the Northwest while Bugiri is located 35 km to the southwest of Tororo town. Bugiri Hospital is 37 km to the south of Busolwe hospital while St. Anthony and Tororo hospital are situated within Tororo municipality. Mbale hospital is located 39km North-east of Tororo town. These were selected because:-

- i) They are within easy and manageable travelling distance from each other
- ii) Three of them, namely Tororo, Mbale and St. Anthony hospitals, are semi-urban while the other two (Busolwe and Bugiri) are rural. The first two together with Mbale have fully established AIDS care clinics while the latter two have none. It is anticipated that differences in management of HIV/AIDS patients exist within the two categories.

The study population will include:

- i) Administrators
- ii) Doctors
- iii) Registered Nurses and Midwives
- iv) Enrolled Nurses and midwives
- v) Medical Assistants
- vi) Anaesthetic Assistants
- vii) Dental assistants

These categories of people are all involved in the handling of HIV/AIDS patients.

The main ethnic groups in Busolwe and Bugiri are Banyole, Samia and Basoga respectively. In the Tororo area there are quite a number of ethnic groups mingled together and these include Adhola, Samia, Itesot, and Banyole. In Mbale the main ethnic group is Gishu.

The research design is a cross-sectional descriptive study assessing knowledge, attitudes, practices and beliefs of health

care personnel in the five named hospitals. The specific strategies for data collection include:

- a) Focus group discussions using a semi-structured topic guide.
- b) Field study using individual interviews with the guidance of a pre-determined, pre-tested questionnaire.

A: FOCUS GROUPS: The groups to be involved in the discussions include:

- i) The different health managers responsible for the different categories of medical personnel. Due to logistic problems, i.e., getting this cadre of people together, time factor, etc., this group's response will be restricted to the questionnaire only. However, two additional focus groups comprising of TASO Tororo clients will be added after the hospital focus groups have been completed.

ii) Medical personnel from the eight different categories in the five hospitals will be grouped into two groups. Registered and enrolled nurses, medical assistants and nursing aides will form one group while Registered and Enrolled midwives, anaesthetic and dental assistants will form the other. These groups are due to their similar tasks in health care delivery.

These focus groups will assess the main beliefs of medically trained personnel in their areas. They will focus on the practices and attitudes towards health care delivery and review the hazards that may be encountered during their day-to-day activities. During focus group discussions health managers will be kept separate from other cadres of health care personnel. Each focus group will consist of 6-10 participants. In all 12 focus groups will be held; 2 in each hospital; and two from TASO Tororo clinic, it is anticipated that each focus groups will last 1 to 1 1/2 hours, not including mobilization time. Two moderators will be present at each session; one to lead the discussion and the other to do the observation and recording. Permission will be sought to tape record them for more extensive, subsequent analysis by the principal investigator. The sessions will be semi-structured relying on general open-ended questions which may be followed by specific probes or prompts as needed.

B: FIELD SURVEY:

In a pre-visit, Health managers estimated an average of 50 health personnel for the named categories in each of the five hospitals. This gives approximately 250 health personnel in the study areas.

SAMPLE SIZE:

The sample size of the population for the study will be obtained using the KISH formula.

$$N = \frac{Z^2 P(1-P)}{E^2}$$

Z = 1.96 = 95% confidence level.

P = 0.5 estimated proportion of the population with the variable of interest

$$E = 0.1 \text{ desired level of precision.}$$
$$(1.96)^2 \times 0.5 (1 - 0.5) = .96$$
$$N = \frac{.96}{(0.1)^2} = \frac{.96}{.01}$$

N=96

SAMPLING PROCEDURE

The convenience sampling procedure will be used. This means that the "sample" that happens to be available at the time period of the research will be selected.

Pre-testing of the data collection methods will be done in Kamuli hospital. This will help in determining the acceptability of the questionnaire in relation to the questions asked. It will also assist in determining the willingness of the medical personnel to answer the questions and collaborate in the study. Assessment of the time required for administration of the questionnaire will be done. This will help further in the revision of the format and presentation of the questions for clarity. Further pre-coding of responses will be done and alterations between open and closed ended questions will be performed. The need for additional instructions for the administration of the questionnaire will be determined.

#### QUALITY CONTROL/DATA MANAGEMENT

Interviewers will be people of integrity, other than health managers of the different categories, selected from S4 leavers from the nearby Tororo College. A pre-requisite will be a sound knowledge of the English language. Training of the interviewers will be done prior to the actual field survey. Interviewers will be mature, sensitive listeners and known to the hospital community. Training sessions will emphasize respect and avoiding stigmatization of the respondents. All information obtained will be taken in strict confidentiality. Further modification of the questionnaire will be possible at the time of training and later in the field as the need arises although it is hoped this will be minimal.

Focus group discussion will be guided by the format outlined in the focus group guide. It may at times be necessary to use probing questions in order to elicit the exact position of the respondent on the issue at hand in the discussion.

It will be important for the interviewers at the end of each interview to check for completeness. Questionnaires will be edited by the principal investigator at the hospital of interview at the end of the day so as to obtain clarity and correct any mistakes present. At the end of the data collection exercise, coding of the data and data entry into a micro-computer will be done with the assistance of a data entry clerk.

Full data analysis will be done by the principal investigator at the conclusion of the data collection and entry by the use of frequency tables; cross tabulations will be evaluated by means of the chi-square test in association with Epi-Info and Ask-SAM base software. Continued consultation with the technical advisor and supervisor will be done during data analysis and write-up periods.

Medical Superintendents, Administrators and participants in the five hospitals will be informed prior to the beginning of the survey so as to obtain maximum co-operation from all those involved.



TIME TABLE

Preparation of the study will be done between the months of September to November 1992 with an aim of completing preliminaries of the proposal lay-out and registration of the study with the National Research Council. Preparation will also include obtaining approval to carry out the study from the University Select Committee for Proposal Review and the Higher Degree Committee. A search for funding will also be done at completion of the proposal approval.

ORGANIZATIONAL PLAN

	Preparatory Phase September–November 1992																					
	DEC 1992				JAN 1993				FEB 1993				MAR 1993				APR 1993					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Pretesting								x														
Training staff												x										
Field work												x	x	x								
Data entry and analysis																						
Consultation on findings																						
Final write up and dissemination																						

During preparatory phase of the study, information about the research will be communicated to the District Medical Officers and District Administrators' offices in Tororo, Iganga and Mbale respectively. Prior to the actual data collection, permission to carry out the research at the different hospitals will be obtained from the respective Medical Superintendents. Letters of introduction from the University and the Department of Community Practice will be obtained and presented to all the administration levels stated above. The District Medical Officers will be requested to provide a letter of authorization allowing the study to be carried out in Tororo, Iganga and Mbale. Interviewers will be expected to give a brief statement about the nature of the study and give assurance of confidentiality for all information obtained. The questionnaire will bear the respondents Cadre for purposes of training if necessary. Explanation will be given to the participants (subjects) that participation in the study is voluntary and they are free to withdraw at any time during the study.

Data collected will be treated in strict confidentiality by the principal investigator, technical advisor and supervisor. The data entry clerk secretary will also treat all information as strictly confidential. The Uganda National Council for Science and Technology will be informed, and clearance will be obtained before doing the research.

#### LIMITATION OF THE STUDY

Focus group discussions will be carried out in five different locations at the various hospitals. A limitation would be the possibility of disrupting the work schedules of the participants involved. This also necessitates the principal investigator to move from one place to another, a situation that may cause unforeseen difficulties, e.g., failure to obtain transport and subsequent missing of a session.

This is a small study conducted in one corner of the country, the findings may not reflect the general picture country-wide. The researcher is a novice handling a very sensitive topic, a situation that may result in bias. Non-probability samples are never truly representative tending to over select some population elements and under select others. There is also a possibility of having refusals to participate in the study owing to inadequate information about the study imparted to the participants. Cross-sectional surveys that only elicit verbal reports are open to both deliberate falsification and unintended distortion. Only long term observations over time can confirm if verbal statements are true indicators of complex behaviours such as refusal to care for patients with HIV/AIDS, stress and professional burnout.

## DISSEMINATION OF RESULTS

Dissemination of results after data analysis and write-up will be to:

- a) Uganda AIDS Commission
- b) The Ministry of Health Headquarters, Entebbe for the attention of Director, AIDS Control Programme
- c) District Medical Office, Tororo, Iganga and Mbale Districts
- d) A copy will be given to Makerere Medical School Library and to the Department of Community Practice library.
- e) A copy will be sent to the funding agency
- f) A personal copy will be given to my Technical Advisor and Supervisor Dr. Tom Barton and Professor John Ross respectively
- g) A copy each will be given as a feed-back to the study population in the five hospitals
- h) A copy will be given to the AIDS Support Organisation (TASO)
- i) A copy will be submitted as a dissertation for partial fulfilment for the award of the Degree of Masters of Medicine, Community Practice.
  - h) A copy will be sent to World Learning Inc.

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BUDGET PROPOSAL FOR STUDY ON KNOWLEDGE ATTITUDE, PRACTICES AND BELIEFS ON HEALTH CARE WORKERS IN FOUR RURAL HOSPITALS IN EASTERN UGANDA.

A. PLANNING:

1. PREVISIT:

There are five places for the previsit namely Busolwe Bugiri, Mbale, Tororo and St. Anthony hospitals.

a. Tororo - Busolwe

Personnel	No.	Days	Rate/Day	Total
1.Honorarium (Sup)	1 x	1	8,500/=	=
				8,500/=
2.Travel (Return public means) (1 PI 1 sup)	2 x	1	15,000/=	=
				30,000/=

b. Tororo - Bugiri

1. Honorarium (sup)	1 x	1	8,500/=	=
				8,500/=
2. Travel (Return public means) (1 PI 1 sup)	2 x	1	15,000/=	=
				30,000/=

b. Tororo - Mbale

1. Honorarium (sup)	2 x	1	8,500/=	=
				8,500/=
2. Travel (Return public means) (1PI 1 sup)	2 x	1	15,000/=	=
				30,000/=

d. Tororo - and St. Anthony

1.Honorarium (sup)	2 x	1	8,500/=	=
				17,000/=

Supplies	Number	
Photocopy paper	1 ream	CHDC
Field note books	2	CHDC
Pencils with rubbers	4	CHDC
Pocket sharpeners	4	CHDC
File folders	4	CHDC
Pens	4	CHDC

Sub-Total = 132,500/=

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B. PRETEST (KAMULI HOSPITAL)

Personnel	No. of days	Rate	Total
1. Honorarium (sup CI)	2 x 2 x	8,500/=	= 25,000/=
2. Perdiem (1 IP,CI, 1 sup)	3 x 2 x	22,000/=	=132,000/=
3. Travel (Return taxi fares) (1 PI, 1sup)	3 x 1 x	20,000/=	=60,000/=
4. Supplies	No.		
Photocopy paper	1 ream		CHDC
Pencils with rubbers	10		CHDC
Pocket sharpeners	10		CHDC
Pens blue	10		CHDC
Note books	2		CHDC

File folders

2

CHDC

SUB TOTAL = 217,500/=

=====

C. TRAINING:

Personnel	No. of days				Rate/day	Total
1. Honorarium (sup CI)	2	x	3	x	8,500/=	= 51,000/=
2. Stipindent (int)	8	x	3	x	1400/=	= 33,600/=
3. Lunch (1PI,1sup,CI 8 int)	11	x	3	x	1500/=	= 49,500/=
4. Tea/coffee/soda a snack	11	x	3	x	1000/=	= 33,000/=
5. Per diem (CI)	1	x	3	x	22,000/=	= 66,000/=

Supplies	Number	
Photocopy	1 ream	CHDC
Note books	8	CHDC
Pencils with rubbers	8	CHDC
Pens blue	8	CHDC
Chalk	20 sticks	CHDC

SUB TOTAL =

233,100/=

=====



D. DATA COLLECTION AND DEBRIEFING.

Personnel	No. of days				Rate/day	Total
1. Honorarium						
PI	1	x	11	x	17,000/=	= 187,000/=
CI	1	x	11	x	17,000/=	= 187,000/=
Sup	1	x	11	x	8,500/=	= 93,500/=
Int.	8	x	2	x	4,300/=	= 68,800/=
Trans.	2	x	2	x	4,300/=	= 17,200/=
2. Perdiem						
CI, PI, sup)	3	x	7	x	22,000/=	= 462,000/=
3. Travel return public means)						
(1PI CI sup)	3	x	3	(no of days	x 20,000/=	= 180,000/=
4. Focus groups refreshments						
11	x	2	groups in each hospital	x 6	x 8000/=	105,000/=
5. Equipment and Supplies:						
Item	No.				=	Total
Pencils with rubbers	12				=	CHDC
Pocket sharpeners	12				=	CHDC
Pens blue	12				=	CHDC
Note books	12				=	CHDC
File folders	12				=	CHDC
Clip boards	24				=	CHDC
Duplicating papers	12 reams				=	CHDC
Duplicating ink	1 tube				=	CHDC
Stencils	1 dozen				=	CHDC
Tape recorder	1				=	CHDC
Blank tapes	11 at 1000/= each				=	11,000/=
Dura cells	20 at 1000/= each				=	20,000/=
Polythene bags	12 at 150				=	1,800/=
SUB TOTAL					=	1,344,900/=

E. DATA ENTRY ANALYSIS AND REPORT WRITING.

1. Data entry and analysis by CHDC						
2. Proposal writing by PI						
	No. of days				Rate/day	Total
	5				17,000/=	85,000/=

E. DATA ENTRY ANALYSIS AND REPORT WRITING.

1. Data entry and analysis by CHDC						
2. Proposal writing by PI						
	No. of days				Rate/day	Total
	5				17,000	85,000/=

3. Supplies:

Computer paper A4 1 box of 2500 sheets continuous by CHDC  
Computer diskettes 720 KB 3.5" 5 by CHDC

BUDGET TOTAL	=	2,013,000/=	=====
CONTINGENCY FUND (5% of total budget)	=	100,650/=	=====
GRAND BUDGET TOTAL	=		
2,113,650/=			=====

## BUDGET JUSTIFICATION:

### PREVISIT:

This will be carried out by the principal investigator and the supervisor. Bugiri and Busolwe hospitals are 35 and 45 kilometres from Tororo town respectively in opposite directions while Mbale hospital is located 39km north-east of Tororo town necessitating three separate trips. Travelling allowance is estimated at 15,000/= (return) per individual. The supervisor to be employed will be from Tororo Hospital at the level of medical officer special grade- hence the inclusion of honorarium and per diem respectively for him.

For Tororo and St. Antony hospitals one day each is allocated for the purpose of the previsit. At the different centres the Principle Investigator and the supervisor will carry out the following activities:

1. Introduce the research topic to the Medical Superintendent and Administrators with an aim of obtaining their maximum cooperation.
2. Ascertain the numbers of the various cadres mentioned who will participate in the interview process.

### PRETEST:

The pretest will be done in Kamuli hospital so as to have a population with characteristics near to the study population. It will involve the principal investigator, co-investigator and supervisor lasting for 2 days. 1 day is for interviews using the questionnaire and 1 day for 2 focus groups. This will justify the amount for honorarium and per diem indicated in the budget proposal.

Transport allowance by public means has been estimated at shs. 20,000/= (return from station Tororo) for each individual. Due to the extensive nature and importance of the topic under study the Proposal Review Committee recommended the including of a co-investigator. This was to ensure that the research is carried out to completion regardless of what might happen to the principal investigator.

### TRAINING:

Interviewers training will be in Tororo hospital with 11 participants (1 IP, 1 sup., CI, 8 inter. ) lasting for 3 days. One day out of Tororo town.

It will be non residential for all the interviewers as they all will come from the Tororo area. Lunch allowance is for all interviewers, 1 principal investigator, co-investigator and 1 supervisor. Mid morning and afternoon tea with a snack is estimated at shs. 1000/= per person per day giving the amount shown in the budget proposal. A training stipend of shs. 2000/= per day for the interviewers has been included.

### DATA COLLECTION AND DEBRIEFING:

Field survey is estimated to last a total of 11 days. During two days at each centre, two interviewers will carry out an average of five (5) interviews per day bringing the total to 100. In the meantime, the Principal Investigator, co-investigator and Supervisor will cover two focus groups at each centre. It is hoped that the required sample of 96 will be covered within the period.

Per diem for the principal investigator, co-investigator and supervisor is only for 7 days as they will be at Tororo hospital for the other 4 days.

Focus group participants will be 11 in number ( 1 PI, 1 rec. 1 foc. 8 members). An allowance of 800/= for refreshments (soda) and snacks has been estimated. This amount: 11 participants x 2 focus groups x 6 hospitals = shs. 105,000/= interviewers honorarium amounts to :- 4,300/= per day x 5 days x 8 interviews = shs. 172,000/= and transcribers honorarium amounts to 2 x 2 days x 4,300/= per day= shs. 68,800/=. Transport allowance is againestimated at 15,000/= (return) for three journeys to Busolwe and Bugiri hospitals for each individual giving 3 x 3 x 15,000/= 180,000/=.

The tape recorder will be borrowed from CHDC where it will be returned at the end of the field survey. Other supplies from CHDC are expected in kind following the approval for funding by CHDC.

It should be noted that all unit costs, rates, and other expenses quoted are estimates. Given the Ugandan situation of fluctuating prices any shortcomings will be covered by the contingency fund.

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A REVIEW OF RESEARCH ON CHILDHOOD  
DIARRHOEA IN UGANDA

Gimono Wamai

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A Project of UNICEF, and Child Health and CDD Programme,  
Development Centre,  
Ministry of Health Makerere University  
JULY 1992

ABSTRACT

The Control of Diarrhoeal Diseases (CDD) Programme was initiated in 1984. Since that time a number of studies have been conducted addressing different aspects of childhood diarrhoea including: incidence, cause, morbidity, mortality, treatment, use of oral rehydration salts (ORS) and other home fluids, health unit and home management of diarrhoea. These studies have been conducted both at local and national levels and have employed various methods of data collection. Despite the range of these studies, there is no central organized catalogue of the CDD studies and their findings.

As a result of lacking an organized data base, there has been reduplication of some activities while other aspects have hardly been studied.

Following a joint meeting between the CDD Programme and the CHDC in March 1992, it was decided that a study be conducted to review completed research on childhood diarrhoea, make an annotated bibliography and recommend research in aspects of childhood

diarrhoea found lacking.

The emerging recommendations will act as a guideline to the CDD programme, the CHDC, UNICEF, other policy makers, NGOs and research institutions interested in childhood diarrhoea.

**OBJECTIVES:**

The objectives of the present study were to:

1. Review completed research on Control of Diarrhoeal Diseases.
2. Make an annotated bibliography of the studies reviewed.
3. Make recommendations for follow up research on aspects of Control of Diarrhoeal Diseases found lacking.

**METHODOLOGY:**

The study was a retrospective review of CDD-related research in Uganda over the last nine years. Data collection was done by reviewing reports of completed studies conducted in Uganda. Sources of these records included: the UNICEF Library, CDD Library, CHDC Library, Albert Cook Library, the Institute of Public Health Library and Dr. Barton's personal library.

**RESULTS:**

Based on recall of recent episodes, a two week incidence between 8.6% and 19.5% was reported. Diarrhoea was most frequently reported in the less than two years age group; this group accounted for between 50% to 80% of diarrhoea cases.

Childhood diarrhoea was attributed to numerous causes. Factors like 'false teeth', 'millet disease', developmental milestone stages and spiritual misfortunes were regarded as important causes of diarrhoea by mothers and traditional healers. Most mothers and traditional healers did not recognise poor sanitation as an important contribution of diarrhoea. The relationship between improper excreta disposal and diarrhoea was not well known. The perception of health workers on causes of diarrhoea were not documented. When a child gets diarrhoea the treatment given has depended on the presumed cause. Actions have ranged from doing nothing at all to giving herbs, tablets, avoiding certain foods, consulting a traditional healer or visiting a health unit. Decision-making procedures and rationale for the decisions taken were not determined. Although food was not deliberately withheld, the child's condition usually dictated that it took more liquids than solids during diarrhoea. There was no single home-based fluid used during diarrhoea in all the regions studied. Those commonly mentioned included: tea, fruit juices, maize porridge, cassava and rice water and wheat flour. Some fluids were avoided during diarrhoea because they were believed to worsen the illness, including: milk, millet porridge and sweet foods/fluids.

Health units (e.g., health centres and dispensaries) were the

commonest source of treatment sought outside the home. A large majority (80%) of rural health workers were Dressers and Nursing Aides. Constraints affecting health units included lack of facilities for preparing and administering the ORS solution in the health unit.

Health inspectors were engaged in health education on prevention and home management of diarrhoea including use of ORT.

Traditional healers were a frequent source of treatment for diarrhoea.

Healers claimed that diarrhoea was the commonest childhood illness they treated.

Oral rehydration salts (ORS) and their use in diarrhoea have been investigated by a number of researchers. The studies showed an awareness about the ORS sachet of up to 90% among mothers, and between 90% and 100% for health workers and inspectors. Most rural

residents (70%) used unprotected water sources. Water was not routinely boiled for drinking. Hand-washing after defecation was practiced more by adults than children.

#### CONCLUSION:

Most research has been done in large town and hence a need for research in small towns as well. There is still a gap in reports documenting diarrhoeal disease mortality. There are no interventional studies to assess the impact of programmes like EPI, nutrition etc. Factors like 'false teeth', 'millet disease', developmental stages and spiritual factors were considered important causes of diarrhoea by mothers and traditional healers.

Management of diarrhoea by private practitioners and shop owners has hardly been studied. Different home available fluids were recommended as suitable for a child suffering from diarrhoea in different ethnic areas. Dangerous practices like 'false teeth' extraction are practiced by some traditional healers as treatment for diarrhoea. Most of the rural and slum dwellers have no access to safe and adequate water and sanitary facilities.

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#### ORAL REHYDRATION THERAPY IN UGANDA:

A COMMUNITY-BASED SURVEY ON THE KNOWLEDGE, ATTITUDES AND PRACTICES OF ORAL REHYDRATION THERAPY IN MASINDI DISTRICT, UGANDA.

C. KISAMBA-MUGERWA and GIMONO WAMAI  
CDD Programme, MoH CHDC UNICEF, 1992

#### ABSTRACT

In Uganda ORT was first introduced in 1984 as a major component of the CDD programme. Evaluation of the programme in 1987 and 1989 and other studies conducted in Uganda show that although a majority of respondents could recognize the ORS sachet, fewer respondents used them during diarrhoea and even fewer used the ORS correctly,

i.e., there existed a knowledge-usage gap. It was the main objective of this survey to identify factors responsible for this gap.

A community-based descriptive cross-sectional survey was conducted in Masindi district to identify household and community factors that constrain appropriate use of ORS. Five focus group discussions were conducted with rural women, health workers and traditional healers. In addition, information was obtained from 240 households about 462 children aged five years and below.

Awareness of ORS was high (214/240, 90%). The concept of oral rehydration was not, however, well recognized by most respondents (152/214, 71%). ORS is more often referred to as a "medicine" than as a rehydrating agent. This misconception affects the way ORS is used and also influences the users' expectations. The rehydrating effect of ORS is not appreciated by the caretakers.

A good proportion of the respondents 190/240 (79%) had ever used the ORS sachet. Of these, 110/190 (58%) mentioned the correct amount of water to be used in mixing a sachet of ORS. When it came to demonstrating, however, fewer people were able to measure the water correctly. Among those who carried out the demonstration, only 26/52 (50% of the demonstrators), (26/240, 11% of the total) were able to measure the correct amount of water. So, although awareness figures may be high, awareness is not equivalent to adequate knowledge and/or skills to practice proper use of ORS.

Diarrhoea was the third commonest (77/463, 17%) illness reported for under-fives after respiratory tract infection and fever in a two week recall period. Action taken when a child suffered from diarrhoea ranged from doing nothing, to using home remedies like ORS, herbs, tablets, porridge and fruits juices to seeking treatment away from home. Whatever the form of treatment, the mothers' therapeutic goal was to stop diarrhoea, i.e., to decrease the frequency of stooling. Even when mothers used ORS in diarrhoea they expected it to stop diarrhoea. Constraints to the use of ORS identified were: a) The misconception of ORS as a 'medicine' used in treatment of diarrhoea; b) Non-availability of ORS sachets at health units and lack of readily available utensils for mixing; c) Lack of readily available water

with  
which to clean the utensils and prepare the ORS solution. In  
view of  
the above findings a number of conclusions and recommendations  
have  
been made.

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#### PARENTAL DISCUSSION OF HIV TRANSMISSION AND AIDS WITH THEIR CHILDREN

IN UGANDA. Karamagi C.A.S Makerere University, Kampala, Uganda.

Objective: AIDS in a major health problem in Uganda, with over  
30,000

cases of AIDS reported, and sero-prevalence rates ranging from 5%  
in

rural areas to 30% in urban areas. Sexual transmission accounts  
for

over 80% of cases. The major preventive strategy adopted is  
health

education on sexual behaviours and AIDS. A major concern,  
however,

is that sexual behaviours are not openly discussed between  
parents and

children in Uganda, and this reluctance may interfere with health  
education at the family level. This study aims at determining to what

degree parents actually talk to their children about AIDS, the  
factors

which facilitate or hinder such discussions and to identify  
parental

communication methods that lead to improved knowledge and  
preventive

behaviors by adolescents. It will relate the information and  
recommendations provided by parents to the knowledge and

practices of  
adolescent children. The information obtained will be used to

design  
an appropriate health education intervention against AIDS.

Design: A cross-sectional survey using a two stage cluster  
sampling

design similar to that used in the WHO-EPI immunization coverage  
surveys will be used.

Setting: The survey will be conducted from January-December,  
1993 in

Mukono District in Uganda because it is affected by the AIDS  
epidemic,

has both urban and rural communities, and is conveniently  
located.

Participants: A sample of 210 households in which both parents  
and

at least one adolescent (aged 12 to 18) reside are present and  
consent

to participate will be randomly selected.

Main outcome measures: Interviewer administered questionnaires  
will

be used to collect information from parents and children on  
demographic characteristics, and on content and methods in sex  
and

AIDS education. Facilitating and hindering factors will also be  
ascertained. Prior to the survey, focus group discussions will

assist  
in designing the questionnaires.

Analysis: Frequencies of parental communications and  
communicating



barriers will be estimated and assessed as predictors of adolescent knowledge and behaviours regarding prevention of AIDS by the Chi2 test and logistic regression analysis using EPIINFO and SAS software. pidemiol  
80

A KNOWLEDGE ATTITUDE AND PRACTICE SURVEY OF  
ORAL REHYDRATION THERAPY IN UGANDA  
SPONSORED BY UNICEF (UGANDA), CDD AND CHDC

PRINCIPAL INVESTIGATORS:

1. KISAMBA-MUGERWA C. DEPARTMENT OF SOCIOLOGY  
MAKERERE UNIVERSITY  
P.O BOX 7062  
KAMPALA.
2. LWANGA J. S. COUNSELLING AND GUIDANCE  
CENTER  
MAKERERE UNIVERSITY  
P.O. BOX 7062  
KAMPALA.
3. WAMAI G. MULAGO HOSPITAL  
P.O BOX 7051  
KAMPALA.

ESTIMATED BUDGET: UG. SHS 6,851,980132/=

DURATION OF STUDY: JUNE-SEPTEMBER 1991

Diarrhoeal diseases are one of the leading childhood killer diseases in developing countries. The Control of Diarrhoeal Diseases (CDD) programme in Uganda has developed several strategies to deal with this health problem. Teaching Health Workers to advise mothers about the use of ORT is one of the primary strategies. In its teaching of the use of ORT, CDD emphasizes use of home-based fluids such as water, weak tea, juices, porridge from millet, rice, maize and soups from all sources.

Some Uganda studies on ORT utilization have identified a significant gap between awareness of the oral diarrhoea therapy and its utilization. So far, these studies have mostly concentrated on the dimensions of this gap. The CDD Programme would like now to find out more of the reasons for this "awareness- utilization" discrepancy in order to plan more effective health education strategies. The present research proposes to address these concerns with an assessment of knowledge, attitudes and behaviours affecting utilization of ORT in four regions of the country. The outcome should be of substantial operational use to the programme and its efforts to evaluate its own progress.

CUTANEOUS HYPERSENSITIVITY REACTIONS IN TUBERCULOSIS  
PATIENTS ON STREPTOMYCIN(S) THIAZETAZONE(T) AND ISONIAZID(H) IN  
MULAGO HOSPITAL

BY

DR. MUGALA FLAVIA M.B ChB (MUK)

THIS DISSERTATION IS SUBMITTED AS A PARTIAL FULFILLMENT FOR THE  
REQUIREMENT OF THE DEGREE OF MASTER OF MEDICINE (INTERNAL  
MEDICINE) IN THE FACULTY OF MEDICINE, MAKERERE UNIVERSITY 1991)

Supervisor: Dr. E. Katabira M.B Ch.B (MU) M.R.C.P

Head of Department of Medicine: Associate Prof. R. Mugerwa M.B

Ch.B (MUK), M.Med (MUK)

## ABSTRACT

The incidence of Tuberculosis is rising in developing countries in association with the high incidence of Human Immuno-Deficiency virus Infection. Though the response to anti-tuberculosis therapy has been favourable in AIDS patients, several studies have noted an increase in drug reactions in AIDS patients on anti tuberculosis therapy. A 20% incidence of cutaneous hypersensitivity reactions in patients on STH from a neighbouring country to Uganda. However, most reports of similar findings in Uganda have been anecdotal and some findings have been conflicting, in that

onestudy of pulmonary tuberculosis in HIV positive patients showed no significant increase in cutaneous side effects in patients on STH as compared to Rifampicin containing regimen.

To determine the incidence of cutaneous hypersensitivity reactions in HIV positive patients and HIV negative patients on standard anti T.B drugs in Mulago. 122 patients with tuberculosis, 72 of which were HIV positive and 50 were HIV negative were prospectively followed for 8 weeks. HIV positive patients were more likely to have extra pulmonary tuberculosis with or without pulmonary tuberculosis, negative mantoux test, pleural effusion, radiological findings of multilobar involvement, low lymphocyte counts, and low haemoglobin levels than HIV negative patients.

Severe cutaneous hypersensitivity reactions (CHR) occurred in 16.6% HIV positive patients and 6% HIV negative patients. (RR 2.42, confidence Interval HIV negative (0.83 <RR <7.04). These results are statistically significant. There was no significant difference in the incidence of mild and moderate cutaneous skin reactions in HIV positive and HIV negative patients. However, HIV positive patients with an AIDS defining illness were more likely to develop a severe CHR than asymptomatic HIV positive patients (RR = 6.13

confidence interval 1.95<RR<1927 P<0.05). Mortality in the HIV positive group was 1.3% and in the HIV positive group was 0%. By the end of six weeks 91.6% of cutaneous reactions had occurred in HIV positive patients and 100% had occurred in HIV negative patients.

Conclusion: Cutaneous hypersensitivity reactions are a significant cause of morbidity in HIV positive patients on STH and also contribute to the mortality associated with AIDS in patients who also have tuberculosis. These reactions are more frequent in patients with an AIDS defining illness, but further objective studies are necessary to confirm these findings.

CARE (UGANDA)

By

Anne Katahoire  
Patrick Mukakanya

CHILD HEALTH AND DEVELOPMENT CENTRE  
MAKERERE UNIVERSITY

OCTOBER, 1992

ABSTRACT

AIDS in Uganda is a major crisis for the whole society. In January, 1991 CARE-Uganda initiated a project in Jinja District with the dual purpose of increasing education on AIDS to the DHT, health facility staff, community leaders and the general public and supporting the formation of a chapter of TASO in Jinja. The project lasted fifteen months and was funded by AMFAR. As the funding for the project was drawing to an end and as this was the first project of its kind in Uganda CARE-Uganda contracted CHDC Makerere University, to evaluate how the project had progressed and its impact so far. This would enable CARE to draw on the project's experience in relation to future projects both in the field of AIDS education and prevention and those involving collaboration with indigenous NGOs.

The major findings of the evaluation are that the project did to some extent strengthen the capabilities of the Ministry of Health authorities in Jinja to more effectively address HIV prevention and control. This it did by enabling the DHET to travel all over Jinja district and organise AIDS education programme and enabling them to create a structure through which AIDS education information could be disseminated to the grassroot level. However, there was a need for more capital investment and longer term funding in order to enable the DHET to continue with the work they had started.

TAESP in collaboration with TASO, Kampala was able to establish a TASO chapter in Jinja which is now providing supportive services to people with AIDS. TAESP experimented with many AIDS education approaches using different modes of communication. However, the approaches tended to be adhoc. As a result it was difficult to establish in concrete terms the impact of TAESP's education activities. This also made it difficult to draw concrete lessons of how different target audiences respond to different kinds of media or modes of communicators e.g., youth, women, illiterates etc.

Although the AIDS committee structure has been established right upto the parish level the structure is fragile needing alot more material and technical support from the DHET.

CARE's involvement with TASO, ACP and the DMO's office in Jinja was perceived by all concerned as supportive and most welcome.

There

is

a need, however, for CARE to continue supporting the DMO's office and TASO Jinja in order to enable them to continue with their AIDS control and prevention activities.

ORPHAN CARE MANAGEMENT BY  
EXTENDED FAMILY NETWORK:  
A COMMUNITY BASED STUDY IN MPIGI, UGANDA

Principal Investigator: MATOVU DAVID

Submission Date: - 22ND SEPTEMBER, 1992.  
Estimated Budget: - 1,021,597/=

Estimated Duration: 30 DAYS

ADDRESS : P.O. BOX 7006  
KAMPALA.

## ABSTRACT

The proposed study will examine orphan care management community responses in one of Uganda's districts, i.e., Mpigi. The study shall basically focus attention on the extended family networks' coping role and suitability as orphan care manager. It shall also look at the underlying influence of caretaker and school institution to actual management of orphan care in the community. Qualitative and quantitative methods will be used to meet the study objectives.

Analysis shall be in form of percentages and frequency distributions for quantitative data, trends and recurrent patterns for the qualitative information.

The study intends to identify measurable variables pertaining to the study problem.

A BASELINE STUDY OF THE USE OF MODERN FAMILY PLANNING  
METHODS IN RURAL UGANDA:

A CASE STUDY OF WOMEN AND MEN OF REPRODUCTIVE AGE (15-49 YEARS)  
IN KAPUWAI PARISH - PALLISA DISTRICT.

PRINCIPAL INVESTIGATOR: DR. AMONGIN MARY  
Department of Community Practice  
Medical School, P. O. Box 7072  
Kampala.

PRINCIPAL ADVISOR: DR. A. ABODA  
Child Health and Development Centre  
Makerere University.

SUPERVISOR: PROF. J.ROSS  
Head of Department Community  
Practice  
P.O.Box 988. Tororo.

TECHNICAL ADVISOR: DR. T. BARTON MD.,  
Child Health and Development Center  
Makerere University.

ESTIMATED DURATION OF STUDY: 4 Months.

ESTIMATED COST: UG. SHS. 3,665,547

FINANCIERS: CHILD HEALTH AND DEVELOPMENT CENTRE  
Makerere University.

## ABSTRACT

In Uganda the rate of contraceptive prevalence is very low especially in the rural areas. The current national prevalence rate is at 6% (1991 National Census).

Although the Family Planning Association of Uganda (FPAU) was formed some decades ago in 1957 to co-ordinate modern family planning activities, the usage has remained very low. The immediate objective of this study is to try to isolate some of the factors which might be responsible for this state of affairs. The ultimate objective is to provide policy makers and program administrators with a better understanding of why family planning program has failed to be widely used especially in rural areas where most of the population stay. The information can then be used to modify the existing delivery systems.

The study will be conducted between June and September 1993 by the Principal Investigator in Kapuwai Parish, Pallisa District. A total number of 328 men and women in reproductive ages of 15-49 years will be randomly selected from all the seven parishes of Kapuwai. Information on knowledge, use, altitude, source of modern family planning services, education, religious, marital status cost and any type of traditional family planning methods used will be collected. A team of trained interviewers will collect the data using a structured questionnaire. Qualitative data from focus group discussions will also be collected by the Principal Investigator and the Research Assistant.

A computer will be used to tabulate the data while the analysis and report writing will be done by the Principal Investigator.

The study is estimated to cost Ug. Shs. 3,665,547 with equipment and supplies provided by Child Health and Development Centre.

The report is expected to be ready for dissemination by October, 1993.

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## ADOLESCENT MOTHERS AND THEIR CHILDREN

A case study of  
needs, resource availability and constraints to  
care  
in a rural area of Eastern Uganda

MAKERERE UNIVERSITY

BY

HANIFA BACHOU, M.B. ChB.  
Senior House Officer  
Mulago Hospital

SPONSORING INSTITUTION(S): CHILD HEALTH AND DEVELOPMENT CENTRE

STARTING DATE: OCTOBER 91

COMPLETION DATE: FEBRUARY 1992

TOTAL COST USHS: 1,393,240/=



DATE OF SUBMISSION: AUGUST 91  
SUPERVISOR: DR. C. KARAMAGI  
TECHNICAL ADVISOR: DR. T. BARTON

## ABSTRACT

Adolescent motherhood is a worldwide problem affecting both mother and child, carrying with it the risk of increased child morbidity and mortality. The adolescent mother suffers severe consequences of psychological, emotional, educational, health and socio-economic well-being. Just as researchers are looking into ways and means of preventing adolescent pregnancy, so should the post-facto phenomenon be looked at because of the increased vulnerability of both mother and child.

The objectives of this study are to identify the needs, available resources and existing constraints to health that are faced by the adolescent mother and her child in a rural setting and to make operational suggestions regarding improvement in their well being.

The study will be conducted in Kiyeyi - Tororo district between October 1991 and March 1992. About 210 adolescent mothers between ages 10 - 17 shall be sampled by 30 cluster 7 quota design.

Focus group discussions, key informant interviews and a supplementary observational study be carried out. Data analysis shall be carried out by the principal investigator using EPI-INFO software package.

Estimated cost of the study is Uganda shillings 1,588,825/-  
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### BASELINE SURVEY FOR COMMUNITY REPRODUCTIVE HEALTH IN SOUTH-WESTERN UGANDA.

Principal Investigator: Dr G.B.Turyasingura  
Co-investigators: Dr C.Biryabarema  
Dr F. Kaharuza

Mailing addresses: 1. Child Health and Development  
Centre,  
Makerere University,  
P.O. Box 6717, Kampala.  
2. CARE-Uganda.  
P.O. Box 7280, Kampala.  
October 1992.

#### ABSTRACT

In this report results from a 1992 reproductive health baseline survey of 1459 women and men of reproductive age in southwestern Uganda are presented. Over half of the respondents had attained primary level schooling; illiteracy levels were highest among females at 31 percent. Over 90% of the women and men in the sample had ever had sexual intercourse; three-quarters had first indulged in sexual intercourse before age 18 years. Eighty percent of the females in the sample and 67% of the males were either currently in union at the time of the survey, or had ever married. Marriage had been early; 42% of the females had been married by the age of 18, the statutory age of marriage. There was expressed desire for large family sizes; two-thirds of the respondents preferred families of five or greater children. Indeed, 21% of the female respondents already had seven or more children.

Most respondents had some knowledge of modern methods of family planning; slightly over 50 percent indicated without prompting that they had heard of at least one modern method. Prompted knowledge was positive for over 80 percent of the respondents. The contraceptive pill and the condom were the most known methods of birth control. The quality of knowledge for a majority of respondents was, however, low. Even for the most commonly heard method, the pill, for example, only 22% of females with some knowledge, knew that the pill has to be taken daily for effective contraception. Only 37 percent knew what would happen if a pill user forgot to take her pill, and only 7 percent were accurate on what measures such a pill user would be advised to take.

Contraceptive use was low: only 10 percent of the females and 9 percent of the males or their spouses reported to have ever used at least one modern method of contraception. Current contraceptive usage was even much lower. Only 3 and 4 percent of the females and males or their spouses respectively, were using at least one modern method of contraception. The pill and the condom were the most commonly used modern methods. The Rhythm method was used much more commonly among males than any of the other methods. One possible explanation for the low contraceptive usage is the lack of family planning outlets, and service providers for most part of the region. Only four

clinics

offered family planning as a service in the whole region.

Regression analysis showed a positive influence of education on the level of knowledge and contraceptive prevalence. The more educated respondents were significantly more likely to have heard of a method of contraception and to either have ever used or be currently using at least one modern method birth control, than the less or not educated respondents.

It is recommended that extensive family planning education be initiated and maintained in the region, and that all existing health units in the region including dispensaries and sub-dispensaries, be facilitated to provide family planning services. Health personnel in all these units should undergo additional training in family planning in order to boost the number of family planning providers and outlets.

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TORORO DISTRICT SANITATION SURVEY  
FINAL DRAFT (25/3/93)

DR.C.KARAMAGI AND DR.A.ABODA  
With the assistance of;

G.T.Mutono-Hiire, D.M.Wabwire  
F.Ouma, I.M.Haumba  
D.Higenyi, S.Okurut  
D.Kasakya, C.Orone-Kanya  
G.Oundo, F.K.Okallany

CHILD HEALTH AND DEVELOPMENT CENTRE  
MAKERERE UNIVERSITY

ABSTRACT:

The Tororo District Sanitation Survey was carried out as part of the Tororo District operational research (OR) course, which was itself a follow-up of the 1990 CHDC/Tororo District CSD linkage workshop recommendations. The main objective of the OR course was to train a core team of health-related personnel based in Tororo District as principal investigators. Experiential training was carried out while conducting a sanitation survey of Tororo District. The focus on sanitation was selected after brain-storming sessions with the Tororo District Health Team, and a review of the available documents. In the UDHS (Kaijuka et al, 1989), the prevalence of diarrhoea was found to be higher among children in the Eastern region. Furthermore, a study that included the eastern area had reported a latrine coverage of 51% to 89%, while less than 5% of the households had improved rubbish disposal methods (UNICEF, 1989).

The Tororo Sanitation Survey was carried out to gather baseline data on factors affecting Tororo District household sanitation patterns and childhood diarrhoeal disease. Specifically, the survey was carried out to;

1. Determine the prevalence and sanitary status of excreta

- disposal facilities among households in Tororo District;
2. Assess the KAP of Tororo District households regarding food hygiene and refuse disposal;
  3. Determine the prevalence of diarrhoeal diseases in young children.

The survey was carried out in Tororo District in July 1991. The study was a cross-sectional survey with a target population of all households in Tororo District. The WHO 30-cluster sampling technique was used to identify 30 clusters corresponding to three fifths of the sub-counties in Tororo District. Twenty-nine clusters were rural, and one was in Tororo Municipality. The survey consisted of a household sanitation survey and a survey of community leaders for constraints to sanitation administration.

In the household survey, seven households were randomly selected from each cluster, yielding a total of 210 households. In the survey on constraints to sanitation administration, three to five local officials and opinion leaders were selected from each cluster.

Pretested, interviewer-administered questionnaires were used in both surveys.

Only 48% of the sampled households had functionally appropriate latrines. Most of the latrines were made of semi-permanent materials, and timber was a limiting resource. Basic knowledge of the value of latrines ranged between 48% and 73%, whereas negative traditional beliefs and attitudes have a minor role (2%-8%). Water was a felt need of the district, and was perceived as a greater priority than sanitation. Handwashing was infrequently done, even after stooling. Storage facilities for food and utensils were generally lacking. The two week recall of diarrhoea in children under age five was 19%, lower than that reported in the 1988/89 UDHS.

Illness was said by the community leaders to be the major problem in the district. Lack of water, tsetse flies, mosquitoes, and lack of latrines were perceived as the main contributory factors to ill health. Lack of effort was the main obstacle to sanitation activities. Other obstacles included lack of tools and materials, lack of specific knowledge, lack of funds, and insufficient transport. Suggested solutions included community mobilization, formation of sanitation maintenance crews, health education, provision of tools and materials, and enforcement of public health by-laws.

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A STUDY OF THE PREVALENCE OF BACTERIURIA IN FEMALE DIABETIC PATIENTS ATTENDING THE MULAGO HOSPITAL DIABETIC CLINIC (MHDC)

BETWEEN FEBRUARY AND MAY, 1991.

BY: NAKIBIRANGO JANE FRANCES M.B.Ch. B (MUK).

A DISSERTATION SUBMITTED AS PARTIAL FULFILMENT FOR THE DEGREE OF MASTER OF MEDICINE (INTERNAL MEDICINE) OF MAKERERE UNIVERSITY KAMPALA, 1991.

SUPERVISORS:

PROF. M.A. OTIM M.R.C.P., M.D.  
PROFESSOR OF MEDICINE  
DEPT. OF MEDICINE, MAKERERE UNIVERSITY.

DR. EDWARD KIGONYA M.D.  
SENIOR CONSULTANT PHYSICIAN  
DEPT. OF MEDICINE, MULAGO HOSPITAL.

ABSTRACT

Background:

Bacteriuria is three to five fold more common in diabetic than in non-diabetic women. Most cases of bacteriuria are asymptomatic and may therefore remain undiagnosed unless actively screened for. Yet the occurrence of bacteriuria in female diabetics predisposes to severe urinary tract infections (UTI) and their complications. The prevalence of bacteriuria in Ugandan diabetics is not known but UTI is thought to be a frequent ailment in this population.

Methods:

From February 13th to May 29th, 1991, bladder aspirated urine specimens from 100 diabetic women attending the Mulago Hospital Diabetic clinic (MHDC) were studied. The prevalence of bacteriuria, the bacterial aetiologic agents and their antibiotic sensitivity profiles were evaluated.

Results:

Bacteriuria occurred in 12% of patients. Symptoms and signs of UTI, although fairly common (27%) were not correlated with presence of bacteriuria. The bacterial organisms isolated included E.Coli (58%), Klebsiella species (25%), Pseudomonas aeruginosa (8%) and Citrobacter freundii (8%). There was a high degree of resistance to antibiotics commonly prescribed

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in Mulago Hospital including cotrimoxazole (75%), tetracycline (75%), ampicillin (75%), chloramphenicol (67%) and nitrofurantoin (50%). Candiduria was an incidental finding in 35% of cases.

Conclusion:

Bacteriuria is fairly common in diabetic women attending MHDC. The course and associated urinary tract morbidity however need further evaluation. Larger studies are needed to evaluate further, the bacterial causes and their antibiotic sensitivity profiles.

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AN INDEPTH SECONDARY ANALYSIS OF THE UGANDA DHS (1988/89) DATA.

DETERMINANTS OF MALNUTRITION IN  
UNDER-FIVES IN UGANDA

Jessica Jitta  
Michael Migadde  
John Mudusu

MINISTRY OF HEALTH  
DEVELOPMENT  
ENTEBBE, UGANDA.  
UNIVERSITY,  
UGANDA.

and

CHILD HEALTH AND  
CENTER MAKERERE  
KAMPALA,





## ABSTRACT:

Using the Uganda Demographic and Health Survey (UDHS) 1988/89 data on children under-five years, a secondary analysis of the magnitude, nature and determinants of malnutrition was made. In investigating the determinants of malnutrition, linkages between socio-demographic, parental, household, environmental, health status and health facility utilization factors were studied. In addition, breastfeeding practices and their relationships with a child's nutrition status were investigated. Generally, malnutrition was high, cutting across geographic, socio-economic and environmental sectors, with nearly half of the under-fives undernourished.

Stunting (low height-for-age) was by far the most prevalent malnutrition problem in Uganda. Over half of the children between one and five years of age were moderately and severely stunted. The most critical period in this stunting process was 4-18 months of age. Rapid increases in stunting levels occur early between the age periods of 3-5 to 6-11 and continue in the 12-17 months period.

The highest stunting was found in rural areas, particularly those of South-western, Western and Eastern regions. The risk of malnutrition was relatively higher for male children, those of parents with little or no formal education, among lower socio-economic groups, and in households of more than four under-fives. Increased maternal educational level was more associated with lower stunting in urban than rural areas where household wealth made more of a difference. Other significant risk factors included being of fifth or higher birth order, born of a teenage mother, having poor health status, poor accessibility and utilization of health facilities and environmental factors like drawing water from unprotected sources.

Underweight also rose rapidly during the early months of life to a level half that of stunting and reached a peak at an earlier age (12-14 months). Significant risk factors for underweight included teenager deliveries, low socio-economic status, little or no formal education for the mother, having suffered from diarrhoea and poor accessibility or utilization of health facilities.

Initiation of breastfeeding was universal and seven out of ten children were exclusively breastfed throughout the first four months of life.

Regardless of socio-economic background, most mothers were

committed to exclusive breastfeeding. Introduction of supplementary foods was timely for most children with only one out of three supplemented after nine months. However, even children supplemented in time, the level of stunting was considerably high. Results also indicated that by the first year, over four in five children were still breastfed; and by the second birthday, about two in five were still breastfed. The UDHS has provided invaluable data on nutrition status and breastfeeding practices. The results presented here should serve as a basis for future research on malnutrition in Uganda. They point to the need for indepth studies into the process and causes of rapidly early stunting which could not be analyzed using the available data set. The analysis also indicated the need for further research into areas of household food security, child care and feeding practices, workload of mothers, the most vulnerable and disadvantaged population -fostered and street children- and an assessment of the effectiveness of current nutrition programs.

Although a casual analysis could not be made, several strategies were advocated to address the problem of malnutrition. These included: creating awareness at all levels of the alarming level of malnutrition, urgent need to finalise and implement the national Food and Nutrition Policy and Strategy, growth monitoring and promotion, training of appropriate manpower and a multi-sectoral approach to the problem. The need for appropriate nutrition messages -in indigenous languages- was identified, alleviation of poverty and increased accessibility to health facilities -especially for rural mothers was also recommended. Success of these interventions depends on Government's political will and financial commitment.

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STUDY ON THE PREVALENCE OF  
PROTEIN -ENERGY MALNUTRITION  
IN CHILDREN 5 YEARS AND UNDER.  
IN KIYEYI TARGET AREA.  
TORORO DISTRICT  
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## ABSTRACT

The nutrition baseline survey was carried out in Kiyeyi Project defined target area in Tororo District, Eastern Uganda from January to April 1990. The overall objective was to assess the nutritional status of children under the age of five years.

The survey sample consisted of 105 households covering 10 villages. The total number of children included in the study was 209. Out of these, 40% were under twelve months of age. Data was collected using a questionnaire covering: demography, social history, home environment, water and sanitation, food production, food preparation, family diet, infant feeding, immunization, and morbidity. Assessment of nutritional status was done with using anthropometry measurements. Clinical examinations and observations were conducted on all children.

Ninety-six percent of the respondents were mothers with a mean age of 28 years. The mean household size was 7.5 individuals with an average of 1.99 children under five years of age. About half (49%) of the respondents had never got ten any formal education, compared to only 22% of the male heads of the households who were uneducated. The main occupation for both men and women was subsistence farming.

Fifty-seven percent (57%) of the interviewed households had no latrine facilities. The main source of water was unprotected springs, wells, and swamps, during both wet and dry seasons; Only 10% of the households had access to boreholes. Cassava, millet, sweet potatoes, groundnut, maize and green vegetables were the main crops cultivated for food by 50% of all the households visited. The main food item found in stock was millet for (74%) of the households.

Sixty-five percent of the households brewed alcoholic beverages and most of these sold it to generate household income. Millet, cassava, maize and sorghum are some of the food commodities used in brewing alcohol.

The 24-hour dietary recall indicated that 72% of households got some form of breakfast and 40% provided snacks for children. Most households provided lunch and supper. The meals of the children were constituted from the high bulk diet of adults. The typical diet throughout the year for most households was stiff millet-cassava bread with green leaf vegetables.

Several foods are culturally prohibited in infant feeding; most of the foods prohibited for young children are among the most available foods for the typical family diet of this community. The majority of mothers (45%) reportedly stopped breastfeeding between 18 and 24 months after delivery. The first food introduced to the majority of the children (69%) was cow's milk. About half (59.6%) of the breastfeeding children had been

introduced to supplementary foods by four months of age, while a total proportion of 91.5% of the children had been introduced to the supplementary foods by the age of six months.

The prevalence of underweight (low weight for age) using z-score indicator of -2SD, was 18.3%. The prevalence of wasting (low height for height) was 0.5%. The prevalence of stunting (low height for age) was 35%. Overall, malnutrition (PEM) increased steadily during the first and second years of life. According

the measurement of mid-upper-arm circumference 13.9% of the children age 12-59 months were at risk, the majority being within the age group of 24-35 months.

The prevalence of stunting and underweight was similar among boys and girls. The mothers of over half (55%) of the stunted children had had no formal education and 70% of stunted children had been sick during the two weeks prior to the study. Forty one percent of the children in alcohol-brewing households were stunted, compared to 24% stunted in non-alcohol-brewing households.