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FACTORS ASSOCIATED WITH DEATH OUTSIDE HEALTH FACILITIES IN LUSAKA DISTRICT

BY

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A dissertation submitted to the University of Zambia in partial fulfillment of the requirements of the Master of Public Health

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May, 2006

DECLARATION

I, Samuel Edward Banda, hereby certify that this dissertation is the product of my own work and, in submitting it for my MPH programme, further attest that it has not been submitted in part or in whole to another university.

Signature:..

Date...31st MAY 2006.........

(Student)

CERTIFICATE OF COMPLETION OF DISSERTATION

I/We ....Seter Siziya...partly. Having supervised and read this dissertation, am/are satisfied that this is the original work of the author under whose name it is being presented. I/We confirm that the work has been completely satisfactory and is ready for presentation to the examiners. (Delete sections that are not applicable).

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APPROVAL PAGE

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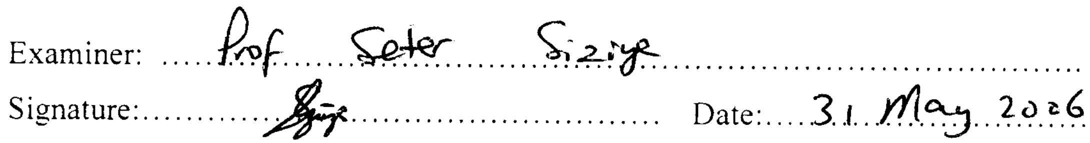

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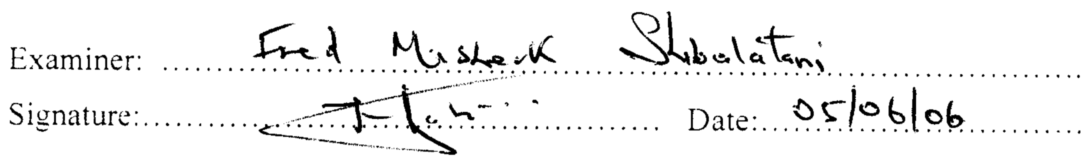

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ABSTRACT

Background: Death after an illness may be perceived as normal, especially after someone has sought care from institutions of care and they have done everything to save life and have failed. In Zambia, while others will die in hospital after such efforts have been made, Health Information System (HIS) records show that almost an equal number of people die outside and are Brought In Dead (BID). The un answered question one will ask is: why are there so many people dying outside health facilities?

Objective: To determine factors contributing to people dying outside health facilities.

Method: A cases-control study. Relatives to those who died outside health facilities were cases and of those who died in the hospital (UTH) were controls.

Results: The results were that the majority of those who die outside health facilities were due to unexpected events/nature of illness which includes: Road Traffic Accidents (RTA), poisoning, murder and all such conditions that are medical emergencies and do not give someone chance to even go to the hospital. It also includes such conditions as are not curable like cancer and all HIV/AIDS related conditions. Financial inaccessibility constituted 14.7%. followed by poor quality of care with 13.0%. About 30.0% of deaths among cases however, were due to non-attendance to health facilities. For those who died in the hospital on the other hand, many died due to nature of illness/unexpected events (60.0%) and negligence of staff (13.0%).

Conclusions: From these results it can be seen that educational level, inability to pay and poor quality of care are the most important determinants of people to die outside health facilities. For those who died in the hospital: unexpected events and /or nature of illness, lack of drugs in the hospital and negligence were the factors they died from. In view of these results therefore, recommendations were made to government and health care providers in order to improve health care in the country. Public welfare assistance scheme (PWAS) is to be increased and publicised so that those who have problems of financial inaccessibility should be

helped: also to improve on the diagnosis and treatment of those that go to the health facilities.

DEDICATION

I dedicate this study to my late mother, Elizabeth Z. Zimba who did not live long enough to see the fruits of her labour but died just the day I should have attended my first lecture in this course.

I also dedicate it to my dear son Dalitso who was born in the midst of this research work and was therefore denied the tender loving care of a father to a son all because I had to finish this work and give him an example of hard work.

I also remember my wife Weka, for her perseverance while I did this work.

Above all, my dedication is
UNTO THE ALMIGHTY GOD
Through whom

I DID,

CAN DO,

AND WILL DO

ALL THINGS

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Mr. V. Chavula, who worked hard to collect data from the relatives to the deceased, it was not an easy task at all but nevertheless he managed to obtain the required information from them. Job well done.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
BID	Brought In Dead
CSO	Central Statistics Office
HBC	Home Based Care
HIS	Health Information Systems
HIV	Human Immunodeficiency Virus
IMR	Infant Mortality Rate
LUDHMT	Lusaka Urban District Health Management Team
MMD	Movement for Multiparty Democracy
OR	Odds Ratio
RTA	Road Traffic Accident
RVD	Ritral Viral Disease
SAP	Structural Adjustment Programme
STD	Sexually Transmitted Diseases
TB	Tuberculosis
UNDP	United Nations Development Programme
UTH	University Teaching Hospital
WHO	World Health Organisation

CHAPTER I

1.0. INTRODUCTION

1.1. Research Background

Health seeking behaviour is a function of comprehensive coverage, quality, cost effectiveness, efficiency, equity, proximity and ease of access. The Zambian government has also enshrined these in its health policy after the health sector reform programme. Indeed, "if health facilities are bereft of drugs or qualified doctors, if the various health and health-related costs are high, if health facilities are far, if waiting time of patients at health facilities are protracted and if health services in general are poor resulting in low curative outputs, then there is bound to be a depressing effect on health demand. Potential patients would prefer either not to seek health services at all or indulge in self-medication or seek the services of those providers through whom their own perceived benefits are optimised" (Hjortsberg and Seshamani, 2002).

The economy of Zambia, being dependent on copper all along has been drastically affected since the reduction in production and fall of copper prices at the world market. Added to this is the laying off of many formally employed people due to liquidation of companies owing to unfair market forces and restructuring of the government ministries coming under the Structural Adjustment Programme (SAP). Thus, many people who were employed have suddenly lost jobs and become poor. The government has estimated the country's economic situation as bad, with 83% of the population being described as poor, and living below the poverty datum line (Zambia Human Rights Report; Economic, Social and cultural rights: 2001). CSO argued further that 1 in every 2 persons in rural areas and 1 in every 3 persons in the urban areas were living in poverty and in Lusaka the poverty level was estimated at 57% (CSO, 2004).

Being the capital city of Zambia, Lusaka is inhabited by all categories of people from all over the country. It is a mixture of the rich and the poor, literate and illiterate, with variety of languages being spoken although Nyanja and Bemba are dominating. By virtue of its nature, it is an acculturated society, tending to be more Western than African, especially

among the literate. Nevertheless, those who live in the peri-urban areas of Lusaka, who also tend to be less westernised tend to keep on to their traditional values, so that one is able to see an expression of traditional beliefs. The total population of Lusaka province is 1,432,401. More than 75% of this population in the province is in Lusaka district, with Chongwe, Kafue and Luangwa districts having 10.1%, 11.3% and 1.6% respectively (2000 Census of Population and Housing, 2001). Thus the population of Lusaka district is 1,103,413.

The health profile of the country has been going through changes with the coming of Health sector reforms since 1993. Up until 1993, Zambia's health system was universal, being socialist influenced in the second republic. With the introduction of multi-party politics by Movement for Multi-party Democracy (MMD), came the health reforms in which the approach to health service provision changed from the universalistic free service to an emphasis on cost sharing by user fees.

The user fee concept came to the Zambian people as a sudden change at a time they least expected it because of being used to free services. In this arrangement, a patient is expected to have a pre-paid scheme which costs K5, 500 per three months and renewable at a lesser fee. For those who do not have a pre-paid scheme, they are asked to pay a consultation fee of K3, 500 in order to be seen and given treatment for that day only. Other investigations like x-ray and laboratory tests carry different charges with them. Children under five years and persons over the age of 65 years with important public health dimensions including ante-natal care, counselling and health education, sexually transmitted diseases (STDs) screening and treatment and contact tracing of TB patients and treatment of chronic conditions like asthma, hypertension, diabetes are all exempted from paying user fees (Kamwanga et al, 2002).

In addition, the very poor have been catered for in the sense that they are required to seek certification through the Social Welfare scheme, and present their certificates in order to be exempted from payment for other services. However, this has not worked very well, as the system of identification of such cases is weak and the reimbursement mechanism

through which the Ministry of Community Development and Social Services provides for such people's services has failed to work. A mechanism to exempt such people was found to be difficult as they were found to be expensive, difficult to administer and ineffective at reaching those in greatest need (GRZ, unpublished)

Death though as old as human society and expected by everyone brings sorrow and has never been a familiar event in human life. Particularly the nature of death and the place of death always matters and have implications. Two categories can be identified namely; unexpected death: which includes murder, poisoning, heart attack, suicide and road traffic accident (RTA) and death after illness in which people under home based care, and acute illnesses fall. In this second category others die out side health facilities while others die at the clinic, hospital or even at the traditional healer's place while seeking health care. In Zambia, the University Teaching Hospital (UTH) recorded 848 Brought in Dead (BIDs) cases in the month of August and 785 in the month of September, giving an average of 28 deaths per day, 852 per month and 10220 per year (BIDs certification Office in the year 2002. The majority of these BIDs had history of illness before their death but for some reason they ended up dying in their homes and the reason for it is not known. However, there are a number of factors at play for a decision to seek health care to be made. The propensity to use health care varies with factors such as socio-economic status and distance to facilities. The expected access cost is probably the largest determinant of seeking care, thus argue Hjortsberg & Seshamani (2002).

A number of factors can be identified as being responsible for this high prevalence of death outside health facilities. Some of them are: poor quality of care, social cultural factors, unexpected death, lack of access to health facilities/ services, and nature of illness.

The people dying unexpectedly normally die due to sudden conditions like murders, manslaughter, suicide, poisoning, self-medication, heart attack and RTA. These conditions are too sudden and may not give any one a chance to go to a health institution when they occur. Those that die under the category of lack of access to health facility/ service are normally hindered by the long distance to the health facility, inability to pay for the cost

of service due to poverty. Poor quality of care causes loss of trust in health care institutions/services, this could be due to absence of drugs at health institutions, failure to respond to given treatment in the past, delayed care, poor staff attitudes, poor diagnosis and advice, and past experiences with health institutions.

Preference to die at home, as a factor, could be due to loss of trust in institutions of care, negative past experiences, religion and failure by institutions to treat some types of diseases as a result; people just decide to die outside health facilities. Social cultural factors inherent in the people could be due to the perception of disease, or the past experiences they have had with similar disease on other people or indeed lack of knowledge of dangerous disease/ signs of dangerous disease. This knowledge here could be wrong or right and the people will act according to the knowledge they have about the problem at hand. If this knowledge therefore is wrong they will act wrongly leading to death outside the health facility.

Home-based care constitutes those that have chronic illness. The common ones in Zambia are Tuberculosis (TB), HIV/AIDS and cancers. Thus owing to their having one of these conditions, when they are put on home based care they are told that the hospital/ clinic cannot do any thing about their illness and so they should just stay at home until they die while receiving support from their families at home.

1.2 Problem Statement.

The government of Zambia is striving to provide Zambians with equity of access to cost effective, quality health care as close to the family as possible, as outlined in the Policy Document after the Health Reforms. In its efforts the government has built a number of health centres in the compounds so that availability and accessibility should be easy for the people.

At national level the number of Health institutions were 1,285: three Central hospitals, four specialised hospitals, 18 General hospitals, 42-district hospitals, one Military hospital and eight industrial hospitals. There are also 899 rural health centres, 187 urban health

centres, 20 industrials centres and 75 urban health centres while the number of health posts is nine and that of Mission hospitals is nineteen.(Ministry of Health,2002)Lusaka province has 84 health institutions with a total of 2,069 beds and 667 cots. Lusaka urban district has 34 public health care institutions with 1,694 beds and 572 cots (GRZ, 1995). There are also private hospitals and surgeries around town and in residential areas.

The government has made eight of these health centers in Lusaka into mini hospitals by adding admission facilities of 30 beds on each health facility. Despite having all these facilities there are still people who die outside health facilities. In 2001, UTH recorded a total of 10,068 BIDs, giving an average of 839 BIDs per month or 28 BIDs per day. In the wards at UTH, a total number of 11,872 deaths were recorded in the same year, giving an average of 989 deaths per month or 33 deaths per day (Health Information System (HIS) Annual BID Report, 2001). In 2002, 9,086 BIDs were recorded in the whole year, 6,392 of them being adults and 2,694 children. (UTH, BID Certification office). The majority of these cases according to BID records, had history of an illness.

The illnesses recorded among BIDs are common ailments which could have been treated and some of the people who died outside health facilities had also visited a health care provider and had been advised on some form of treatment or remedy before they died (Mwanza, 2000). This high number of BIDs could be reduced if patients could have access to health services and could be advised properly and treated adequately, and other causes of death outside health facilities like RTA were addressed. At national level, Zambia's mortality for all ages is 114,224 actual deaths from 5,236,165 actual population (males), and 112,210 actual deaths from 5,185,174 (female's) actual population (WHO, 2002).

In Zambia, access to health care, as an individual right does not enjoy official recognition. Poor funding to health institutions and user fees introduced as part of the structural adjustment measure have combined to produce a poor state of health in the nation (Zambia Human Rights report, 2001).

In general, the quality of life has reduced as can be noted from the reduction of life expectancy from 43 in 1995 to 37 in 2001. HIV prevalence is at 16%(CSO, 2003), incidence of TB increased from 100/100,000 in 1984 to 500/100,000 in 1996. Infant mortality rate (IMR), 109/1000 live births and child mortality at 202/1000 births (UNDP 2000). There are many factors that could contribute to people dying outside health facilities and are as out lined by the problem analysis diagram in Figure I and could be listed as: (1) poor quality of care which is caused by lack of drugs in the hospital, and loss of trust in the care-giving institutions because of delayed care, poor staff attitudes and institutions failing to treat some types of illnesses and also inappropriate diagnosis and advice from health care providers, (2) lack of access to health facilities or services due to distance and inability to pay, (3) nature of illness, which comprises two categories, namely, chronic and emergency illnesses, (4) social-cultural factors being caused by lack of knowledge about dangerous disease and its signs and symptoms, perceptions about disease and past experiences about disease and/or in health institutions, (5) for some people it is merely a choice to die at home because of their religious beliefs and past bad experiences in or with health institutions. (6) Another category of people is those that normally die outside the institutions of health care in unexpected eventualities. Here, burns, drowning, falls/injuries, poisoning and RTA are included.

It is natural that when people fall sick, they usually respond by seeking health care in order to solve the problem. While it is appreciated that not all diseases can be cured by medical science, most of the health problems have remedies and should be handled competently by healthcare providers. But where people have died outside health facilities, especially after an illness, it raises questions such as; "Why are people dying outside health facilities?" The reason such a question is asked is because people expect that an ailment must be cured by the existing health care facilities, but they don't seem to be when there are many BIDs. Therefore a discrepancy is perceived between what is expected (i.e. people's health problems managed at health facilities) and what is obtaining on the ground, illnesses not cured resulting in high number of BIDs and the reasons for this scenario are not well known. There has been no research done in the Zambian context to determine such factors as could explain why so many people were dying outside health

facilities. There was a need to understand such factors if something has to be done about the problem. It is for this reason that this study was proposed.

This study, therefore, generated information to bridge this knowledge gap in health seeking behaviour and its dynamics by discovering factors involved in it. This information will help the health care providers in organising their services to the taste of their clientele.

1. HEALTH SERVICES FACTORS

POOR QUALITY OF CARE

- Lack of drugs
- Loss of trust in health care institutions
- Delayed care.
- Institutions failing to treat type of illness
- Poor staff attitudes
- Past experiences with health institutions
- Poor diagnosis and advice

LACK OF ACCESS

- DISTANCE
- INABILITY TO PAY
- TRANSPORT

2. SOCIO-CULTURAL FACTORS

SOCIAL FACTORS

- Lack of knowledge of disease
- Lack of knowledge of Dangerous signs and symptoms of disease
- Perceptions of disease
- Past negative experiences
- Religion
- Health seeking behaviour

3. NATURE OF ILLNESS

ACUTE/MEDICAL EMERGENCES

- STROKE
- HEART ATTACK
- ASTHMATIC ATTACK

CHRONICALLY ILL

- HIV/AIDS
- TB
- CANCER

4. UNEXPETED EVENTS

ACCIDENTS

- DROWNINIG
- BURNS
- FALL/INJURIES
- POISONING
- RTA
- MURDER
- SUICIDE

DYING OUTSIDE HEALTH FACILITIES.

1.4. RESEARCH OBJECTIVES

The General objective of the study was to determine factors contributing to people dying outside health facilities. The specific objectives were to: (i) establish the social demographic characteristics of people associated with dying in and outside health facilities, (ii) establish the nature and type of deaths occurring in and outside health facilities, (iii) determine whether or not people choose to die in and outside health facilities, (iv) find out the proportion of people under home based care dying in and outside health facilities, (v) compare the proportion of people dying due to lack of access to health facilities or services between people dying in and outside health facilities, (vi) determine social-cultural factors that influence people's health seeking behaviour, (vii) compare the proportions of deaths due to poor diagnosis and advice between the cases and controls and (viii) make recommendations to government and health care institutions at various levels.

1.5 Research Question.

The Research question was why are people dying outside health facilities?

1.6 Research Hypothesis.

Two hypothesis were postulated, and these were; (i) People die outside health facilities because they cannot access health care facilities or services for various reasons.(ii) People die outside health facilities because of poor diagnosis and advice from health care institutions.

CHAPTER II

2.0. LITERATURE REVIEW.

The literature review has been arranged into sub-headings according to studies done on death or mortality patterns or trends in various parts of the world. Others are according to factors thought to be related to cause of death outside health facilities.

In a study to determine factors associated with home death among older adults who received palliative nursing care in the home, 151 family care-givers of patients were telephone interviewed. Patient characteristics and informal care-giver characteristics were the concentration of the study. The three factors determined were that the odds of dying at home were greater when; the patient lived with a caregiver, patients stated a preference to die at home and family physician made home visits (Brazil, et al; 2000).

In another study to determine factors associated with location of death, 75 patients who died at home were cases and 75 randomly selected among patients receiving the same service who died in the hospital were controls. The factors determining were: patient's preference for dying at home recorded at the time of the initial assessment, a family member other than spouse was involved in the patient's care and use of private shift nursing (Whinney, 1995).

In a retrospective study of audit of bodies brought in dead to UTH from April 7 to September 30, Mwanza (2000) concluded that there were a significant number of people dying every day due to medical conditions, which had been brought under control in other places of the world. There were more people dying at home and brought in dead (BIDs) than those dying in the hospital. In 2000 there were 12,240 BIDs as compared to 8,056 in patient deaths at UTH. He observed that medical ailments still accounted for the largest proportion of the BIDs and that most of them had been to a health worker and given some medication before dying (Mwanza; 2000).

Trends in the place of death of cancer patients, 1992–1997

In a population study of patients that died of cancer in Nova Scotia, a total of 13 936 people that died of cancer were studied. Of all these 10, 266 (73.7%) died in hospital and 3,670 (26.3%) died out of hospital. Over the study period the proportion of people who died out of hospital rose by 52%, from 19.8% (433/2182) in 1992 to 30.2% (713/2359) in 1997. Predictors for death outside hospital included; year of death, female sex, old age, length of survival from time of diagnosis to death, receiving palliative radiation, and region of death. (Burge, Lawson, Johnston, 2003)

Sudden infant death syndrome

The deaths of 119 infants were studied. Their mean age was 109.3 days (range: 6-350). The diagnoses were SIDS in 88 deaths, accidental suffocation in 16, and undetermined in 15. Infants were found prone in 61.1% of cases and were found on a sleep surface not designed for infants in 75.9%. The head or face was covered by bedding in 29.4%. A shared sleep surface was the site of death in 47.1%. Only 8.4% of deaths involved infants found nonprone and alone, with head and face uncovered (Kemp, J, 2000)

Place of death and its predictors among cancer patients in America

Of the 1,793 local patients studied, 251 (14%) died at M.D. Anderson Cancer Center; the remaining 86% died elsewhere. A total of 617 (34%) died at home, and 929 (52%) died in an acute hospital setting (including M.D. Anderson). A total of 1,040 (58%) died within 2 years of registration. The risk of hospital death versus home death increased for patients with cancer at a hematologic site and black ethnicity and it decreased for patients who paid with Medicare. It was concluded that most patients died in an acute care hospital setting and within 2 years of registration. The data showed some predictors of hospital death for cancer patients and suggested that better hospital palliative care services and integrated palliative care systems that bridge community and acute hospitals were needed.
(Bruera, E, Russell N, Sweeney C, Fisch, M,J. Palmer,L 2002),

Determinants of place of death in Oregon, America

Throughout the United States, use and availability of acute care hospital beds have been confirmed to be the principal determining factors in location of death .Within that constraint, however, the availability of other resources and services both facilitates the process of arranging for patients to die outside the hospital and improves satisfaction with the quality of terminal care.

Many factors probably contributed to Oregon's culture in care of the dying. For example, since 1983, Oregon health decisions has worked to educate the public about the right to make choices in end-of-life care. Oregonians have allocated more resources to support death at home and have made quality of the care of dying patients a funding priority in the Oregon Health Plan. In Oregon's environment of attention to end-of-life care, fewer Oregonians are dying in the hospital and most family members express high satisfaction with the end-of-life care their loved one received. (Tolle,S,W, Rosenfeld A, G, Tilden,V,P, Park,Y, 1999)

Maternal and Child Mortality in Zambia

An analysis of the situations, trends and determinants of childhood and maternal mortality over the past three decades in Zambia, showed that many countries started to experience stagnation and reversals in trends of mortality especially in the 1970s and 1980s. The reasons advanced included; adverse economic conditions experienced since the 1970s, limited ability of countries to implement exogenously developed public interventions which require a health infrastructure to which a major proportion of the population has access and increase in morbidity and mortality from HIV/AIDS, especially in countries of sub-Saharan Africa. Malaria, malnutrition, pneumonia, measles, diarrhoeal diseases, anaemia and disorders of newborn were the seven major causes of death among infants and children in Zambia (Nsemukila, 1994)

In a study to determine Child mortality rates, cause of death and define areas in which preventive measures could be applied, it was discovered that there were 4,105 child deaths and 837 stillbirths. It was estimated that for a birth rate of 50 per thousand populations

there was a 69.4 mortality rate. It was also calculated that 6,000 (22%) of babies might have been born at home and could have a prenatal mortality rate of 71.0 per thousand births. Infant mortality rate was at 83 per thousand live births and the death rate for the 12 to 23 months age group was 43 per thousand (Chintu and Watt, 1982)

Infant mortality, causes of death and age at death of children in the Gwembe valley was determined by Vicary's study (1974), He discovered that 29% were due to diarrhoea, 16% due to malaria. Where there were no wells for water, diarrhoea was 41%. Seventeen percent were due to tetanus with some dying immediately after birth. Pneumonia and whooping cough were the causes of death for others (Vicary 1974)

Mortality Patterns Among Nigerian Children

A study of paediatric deaths in the Calaba University teaching hospital, during a four-year period (January 1984 - December 1987) showed an overall mortality of 80 per 1000 paediatrics admissions. Up to 47.0% of the deaths were of the newborn with a decline of 7.0% in children aged 61 months to 14 years. Major causes of death were identified as tetanus, low birth weight and birth asphyxia in the newborn; malnutrition, pneumonia and measles in the pre-school age and anaemia in the older children. neonatal tetanus and malnutrition played a leading role in the overall mortality (Asindi et al, 1995)

Trends in The Utilisation of Health Services.

In a study to determine whether health reforms had contributed anything to the quality of health care in Zambia, it was concluded that there was some decline in the number of people going to health institutions after the introduction of cost sharing. Households, care providers and attendance records from both rural and urban health institutions all indicated that utilisation of health facilities had dropped with the peak decline in 1994. However, the decline was more temporal than permanent because it started going up again. High proportions of respondents said that if they fell ill and had no money, they would just stay at home and not go to any health institution (Kamwanga et al, 1999).

Trends in The Utilisation and Quality of Health Care.

The study of factors that have contributed to the trends in the health sector since 1992, has shown that utilisation levels and quality of health services in Zambia between 1992 and 1995 show a declining trend especially as regards to attendance levels at health facilities. Quality of services also has distinctly deteriorated. The trends have been associated with the introduction of user fees for health services in the country. User fees are reinforced by a number of other mutually interactive forces like retrenchments, company closures and liquidation, relative prices, quality of health service and other SAP effects which collectively have been responsible for the changes that have been witnessed in the health usage and the overall epidemiological environment in the country (Seshamani, 2002).

User Fees And Attendance.

The propensity to use health care varies with factors such as socio-economic status and distance to facilities. There is clear evidence that the level of fees charged has had a bearing on attendance at the health facility. There is evidence that private and public health facilities which hiked their fees after introduction of user fees experienced a noticeable decline in attendance. Where fees were more or less maintained at their prevailing levels, there was an increase in the clientele (Seshamani, 2002).

Poverty And Health Seeking Behaviour.

In looking at poverty, equity, health and its relationship with health seeking behaviour in Zambia, it was concluded that the level of poverty and access to health care are the most influential factors determining health-seeking behaviour. Differences in individuals' health seeking behaviour are shown in relation to poverty and distance. The percentage of extremely poor not seeking health care when ill is significantly higher than the moderately poor and non-poor. Those households within 5 kilometres from the nearest health care facility tended to consult a health facility for their illnesses more than those living further away (Hjortsberg and Seshamani, 2002).

Social Behaviour Aspects And Health Seeking Behaviour.

In a descriptive, qualitative and quantitative study to seek information on health seeking behaviour in relation to Sexually Transmitted Diseases (STD) among the youths in Lusaka urban, factors contributing to the delay in seeking treatment from appropriate health services included low standard of quality of services offered at government health centres and attitudes of the public, which tend to stigmatise those with STD. The majority of the patients (59.3%) only resorted to government health centres after attempting to get cures from the various sources (Kalonga, 1993, unpublished).

Health Seeking Culture And Behaviour.

Health seeking behaviour varies according to cultural and ethnic background. In a number of societies, the outbreak of a disease with no known cure or origin may be attributed to the commission of an offence against one's spirits, the ancestors or the gods. It could even be said to be an omission of duty on the part of an infected person. It could also be attributed to a curse from a jealous neighbour, co-wife or even a family member or someone who had been wronged. In such a situation, there is belief that western medicine can provide neither an explanation nor a cure for certain diseases. Therefore, families whose relatives suffer from a disease whose origin has been attributed to supernatural causes may seek explanation and possible cure for the disease at fetish shrines, diviners or spiritists. It has been observed that beliefs connected with magic, witchcraft, spirits and the living dead are areas of traditional religions, which are in no danger of an immediate abandonment (Awasabo - Asare and Anarfi, 1997).

In Ghana a study to determine health-seeking behaviour of persons with HIV/AIDS concluded that people's health seeking behaviour, to a large extent, depends upon their understanding and interpretation of the causes of their sickness. Where people accept a germ theory of disease causation, their attitude to the search for a cure will differ from the attitude of those who attribute the disease to a supernatural cause (Asare and Anarfi,1997)

CHAPTER III

3.0 METHODOLOGY

This section will look at the methodology used in conducting this study. It describes the variables used, sample size calculation, sampling methods, data collection techniques and analysis of the study.

3.1 Research Design

This was a case control study targeting families of the BIDs and In-Patient deaths. The cases were taken from among the BIDs for the period of May-October, 2003, and controls were taken from among those that died at the University Teaching Hospital (UTH) during the same period.

3.2 Research Variables

The dependant variable was; death outside health facilities while the independent Variables were, nature of death, accidents, choice of place of death, socio-cultural factors, accessibility of services, and quality of care.

3.3 Research Setting

The UTH was the site for this study because all BIDs in Lusaka Urban, regardless of where they take place, are taken to UTH for certification by the doctors. It also allowed for controls as it has the largest bed space for admission. Going to talk to people in their homes would have been more difficult to achieve because of the difficulty of locating the many places especially in the compounds given that some addresses given at the UTH are not adequate to locate the places.

3.4.0 Sample Selection and Approach

This sub section discusses the composition of the study population, describes the study units, the pre-test study and how the sample size was calculated.

3.4.1 Study Population

The study population comprised family representatives of people who died outside a health facility as cases, and family representatives of those who died in the hospital, living within Lusaka district.

3.4.2 Study Units

Since this was a case control study, cases were selected among the family spokes persons who included brothers, sisters, cousins, mothers, fathers, grand parents, uncles and aunties to brought-in-dead bodies and the controls were selected among spokes persons related to those that died in the UTH with similar relationships like for cases.

3.4.3 Pre-Test Study And Sample Size

The pre-test study for this research was carried out at the UTH. Training of research assistants was done during the same period. It was learnt that nurses could not be used to collect data because of the nature of the study. Someone had to sit at the BID certification office in order to identify cases and interview them while controls could only be found and interviewed from the mortuary at the time of collecting the body. Nurses by virtue of being confined in the ward could not have managed to collect data. It also helped in calculation of the sample size as shown in Pocock's formula.

In order to determine the sample size, a pre-test study was done in April 2003. A total of 30 cases and 30 controls were selected and interviewed. Using a questionnaire, reasons for death in and outside health facilities were obtained using the factors thought to be responsible. The factor which was most reported as reason for death was taken and used to make computation. At least 8 out of 30 cases were found to have died outside a health facility because of the nature and type of illness they had and 13 out of 30 were found to have died of similar causes in the hospital, and percentages were computed as follows:
Cases $= 8/30 \times 100 = 27\%$ and controls $= 13/30 \times 100 = 43\%$

These percentages were used in Pocock's formula as follows:

$$n=\frac{P1(100-P1)+p2(100-P2)\times f(\alpha+\beta)}{(P1-P2)^2}$$

$$=\frac{27(100-27)+43(100-43)\times 7.85}{(27\text{-}43)^2}$$

$$=\frac{(27\times 73)+(43\times 57)\times 7.85}{(16)^2}$$

$$=\frac{(1971+2451)\times 7.85}{256}$$

$$=\frac{34712.7\times 7.85}{256}$$

$$=135.6$$

=136 persons in each group

When: n = sample size

P1= Population 1 (cases)

P2= Population 2 (controls)

$f(\alpha+\beta)$= 7.85 at 80% power and 5% alpha

There was a 5% - 10% refusal rate among both cases and controls.

3.5 Sampling Method

Systematic Random Sampling was used to select the subjects. Every third person that brought a dead body was asked to be interviewed (K = 3). BIDS were sampled from the BID certification office, whereas the controls were sampled from the mortuary mostly at the time of collecting the bodies for burial. This study did not depend on old records of cases that had died at home or in hospital because it was going to be difficult to trace dead people from old records. Some could have shifted while others were going to be simply difficult to trace.

3.6 Data Collection Technique

In order to collect the necessary data, a semi-structured questionnaire was administered to: (i) Family spokes persons of the BIDs and (ii) Family spokes persons of those who died in hospital.

This technique was found to be suitable because some of the respondents were not able to read and write and so were not able to fill in the questionnaire on their own. The

researcher had tried self-administered questionnaire technique during the pre-test study but discovered it unsuitable.

3.7 Data analysis

Data for this study was analysed by use of Epi info 2002 at a significance level of 0.025 because the data was analysed two times. First during the pre-test study where data for 30 cases and 30 controls were collected and analysed to help in determining the sample size. Latter the rest of the sample was collected and analysed together with the pre-study data.

3.8 Ethical Considerations

As a matter of ethical consideration, permission to conduct the study was sought from the Research Ethics Committee of the University of Zambia, School of Medicine, Forensic Department as BIDs have forensic issues involved, Managing Director of the UTH to interview family spokes persons of those who died in hospital and a written consent was sought from subjects participating in the study. In order to promote anonymity the interview schedule bore no name for the respondent.

3.9 Limitations of the Study

The major limitation of this study was the fact that about 5% - 10% of the people refused to participate in the study. It is not clear what kind they were but a mixture of cases and controls. Others said it was time consuming, while others felt that they were not the right people to give such information and still another category just declined. If these people were of similar characteristics, they could have caused a systematic exclusion of a certain category but no one knows for sure what kind they were.

CHAPTER IV

4.0 RESULTS

This chapter presents results according to the objectives of the study namely; (i) Socio-demographic characteristics, (ii) Nature and type of death, (iii) Choice of place of death, (iv) Home-based care membership, (v) Access to health facilities, (vi) Socio-cultural factors influencing behaviour, (vii) Quality of care.

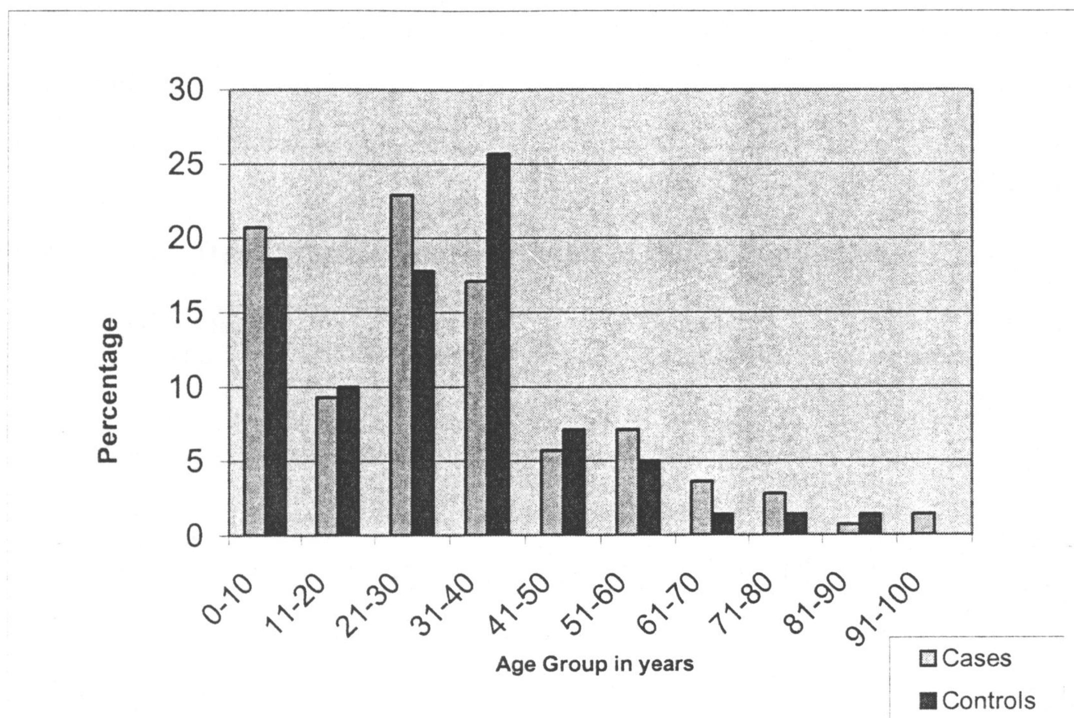
Although this was designed as a random selection of study subjects, about 15- 20 people had refused to participate in the study and they were replaced by others. This could have introduced some bias which I am unable to determine direction because no information was collected from those who denied participation.

4.1.0 Socio-Demographic Characteristics of the Study Population

4.1.1 Age

The study population comprised 140 cases and 140 controls. Figure 2 shows the distribution of cases and controls by age group. Most of the deaths in both groups were in the 0-10 age group, (21% of the cases and 18% of the controls), 21-30 age group (23% of the cases and 17% of the controls) and 31-40 age group (16.5% for cases and 26% for controls). There was no difference in age composition between those that died in the health facility and those that died outside ($p = 0.899$)

Figure 2: Distribution of Deaths Among Study Population by Age.



4.1.2 Sexes

Other socio–demographic characteristics of the study population are shown in Table1. There were more females (54.3% and 52.9%) among the cases and controls respectively as compared to (45.7% and 47.1%) of males among cases and controls respectively. No significant difference in the composition of males and females between cases and controls was observed (p = 0.905).

4.1.3 Residential areas

There were 10% more cases than controls that died among those living in high-density areas. However, no significant association was observed between residential areas and dying outside health facilities (p = 0.086).

4.1.5 Occupations

Although there were more unemployed people among the cases, no significant difference in employment status was observed between cases and controls (p= 0.147).

4.1.5. Educational statuses

Unlike in occupation and residential area, education status in this study was important. A significantly higher number of people with little or no education died outside health facilities than in hospital (p = 0.007).

Table 1: Socio-Demographic Characteristics of Study Population

Socio-demographic characteristics	Cases Total=140 No.	%	Controls Total=140 No.	%	Chi-square	P-value
Sex					0.01	0.905
Female	76	54.3	74	52.9		
Male	64	45.7	66	47.1		
Occupation*					1.76	0.185
Employed	46	32.9	60	42.9		
Unemployed	87	62.1	79	56.4		
Unknown*	7	5.0	1	0.7		
Residence						
High density	117	83.6	102	72.8	4.91	0.086
Medium density	17	12.1	26	18.6		
Low density	6	4.3	12	8.6		
Educational level						
None	38	27.1	21	15.0	12.26	0.007
Primary	52	37.1	43	30.7		
Secondary	47	33.6	67	47.9		
Tertiary	3	2.1	9	6.4		

*7 cases and 1 control not included because of unknown occupation status

4.2.0 Nature and Type of Death of the Study Population.

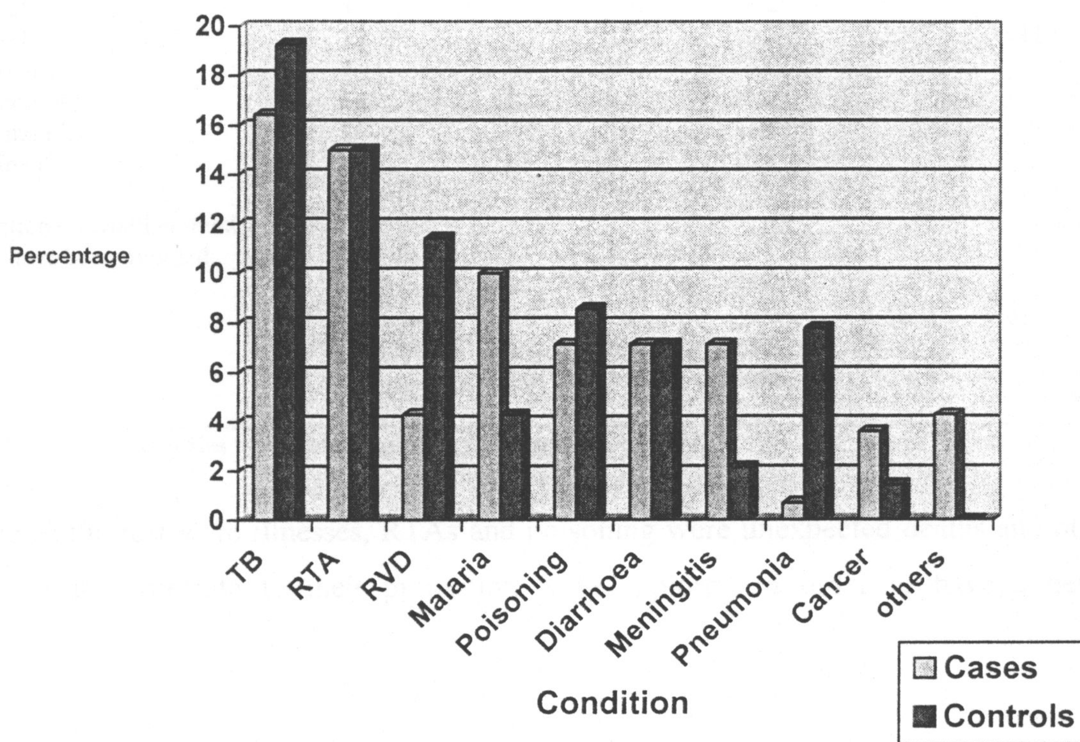
This section discusses the nature and type of death among the study population. The nature of death falls into two main groups; death after illness and unexpected death. The type describes the specifics within these main groups like the type of illness and type of unexpected event that caused the death like murder, poisoning, and RTA.

4.2.1 Causes of Death among Cases and Controls

Cause of death here refers to the actual physical problem the patient had that led to death. Figure 3 shows the top 10 causes of death among cases and controls in descending order.

In both groups tuberculosis was the major cause of death,16.0% and 18.5% for cases and controls respectively, followed by RTA with 15.0% of deaths in each group, then HIV/AIDS (RVD) with 4.2% among the cases and 11.4% among the controls. However, among controls poisoning 8.6%, pneumonia 7.9% diarrhea 7.1% and malaria 4.2% occupied fourth to seventh positions as opposed to the cases where malaria 10.0% was third and poisoning 7.1%, diarrhoea 7.1%, meningitis 7.1% and RVD 4.2% took the fourth to seventh positions respectively.

Figure 3: Top 10 causes of Death among the Study Populations.



4.2.2 Perceptions about whether Death could have been avoided.

Relatives to the deceased were asked what they thought about the death of their relatives in terms of whether it was possible to avoid that death or not. Table 2 is showing that 28.6% among the cases and 20.0% among controls felt that the deceased's death could have been avoided. The test of association was not significant (p= 0.037). In terms of duration of illness, the majority of the people that died were those who were ill for less

than a week for both case (32.8%) and controls (32.1%), followed by those with 7-12 months duration among the cases (12.9%), while the less than 6 months duration followed among the controls (20.0%). There was an association between duration of illness and dying outside health facilities (p = 0.011).

Table2: Perceptions about Whether Death could have been Avoided and Duration of Illness among Study Population.

Characteristics	*Cases Total=140*		Controls Total=140		chi-square	*P-value*
	N0.	%	No.	%		
Duration of last illness						
< 1 week	46	32.8	45	32.2		
1-4 weeks	13	9.3	15	10.7	12.97	0.011
< 6 months	5	3.6	28	20.0		
7-12 months	18	12.9	21	15.0		
13-24 months	14	10.0	16	11.4		
undefined*	44	31.4	15	10.7		
Perception on whether death Could have been avoided						
No	57	40.7	78	55.7		
Yes	40	28.6	28	20.0	4.35	0.037
Unknown*	43	30.7	34	24.3		
Total	140	100.0	140	100.0		

* Unknown categories were not included in the significance testing

Where as the rest were illnesses, RTAs and poisoning were unexpected deaths and other factors that contribute to their promotion were explored in order to have a better understanding.

4.2.3 Road Traffic Accidents and the Site of Occurrence

For those who died due to RTA, which was equal (15.0%) for cases and controls, Figure 4 shows that Great East Road had the highest number of accidents among cases and controls, followed by Leopards hill road and city market as site of accident. It was found that in 38.0% of the accidents, the Police arrived within 10-30 minutes at the scene of accident, while in 33.3% of the accidents the Police arrived after 30 minutes but before 1

hour elapsed. This information also shows that there was no significant association between the site of accident and dying outside health facilities (p = 0.917).

Figure 4: RTAs and the Site Where they Occurred

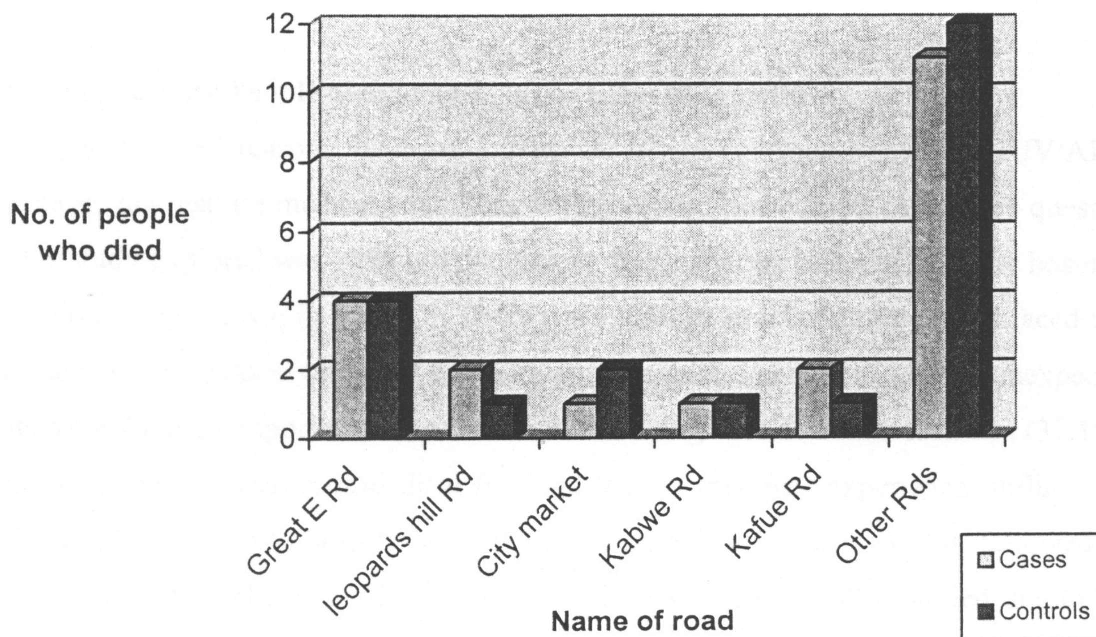


Table 3: Road Accident related factors

First aid Kit with the police	Cases Total=140 No.	%	Controls Total=140 No.	%	Chi-square	P-value
No equipment	17	12.0	20	14.4	0.33	0.568
Unknown*	0	0.0	9	6.4		
N/A	123	88.0	111	79.2		
Total	140	100.0	140	100.0		
Time of taking victims from accident site to hospital						
<30 minutes						
30-60 minutes	15		18		0.37	0.544
Not known*	1		1			
Total	5		2			
	21		21			

* Not included in the test of significance because of unknown status

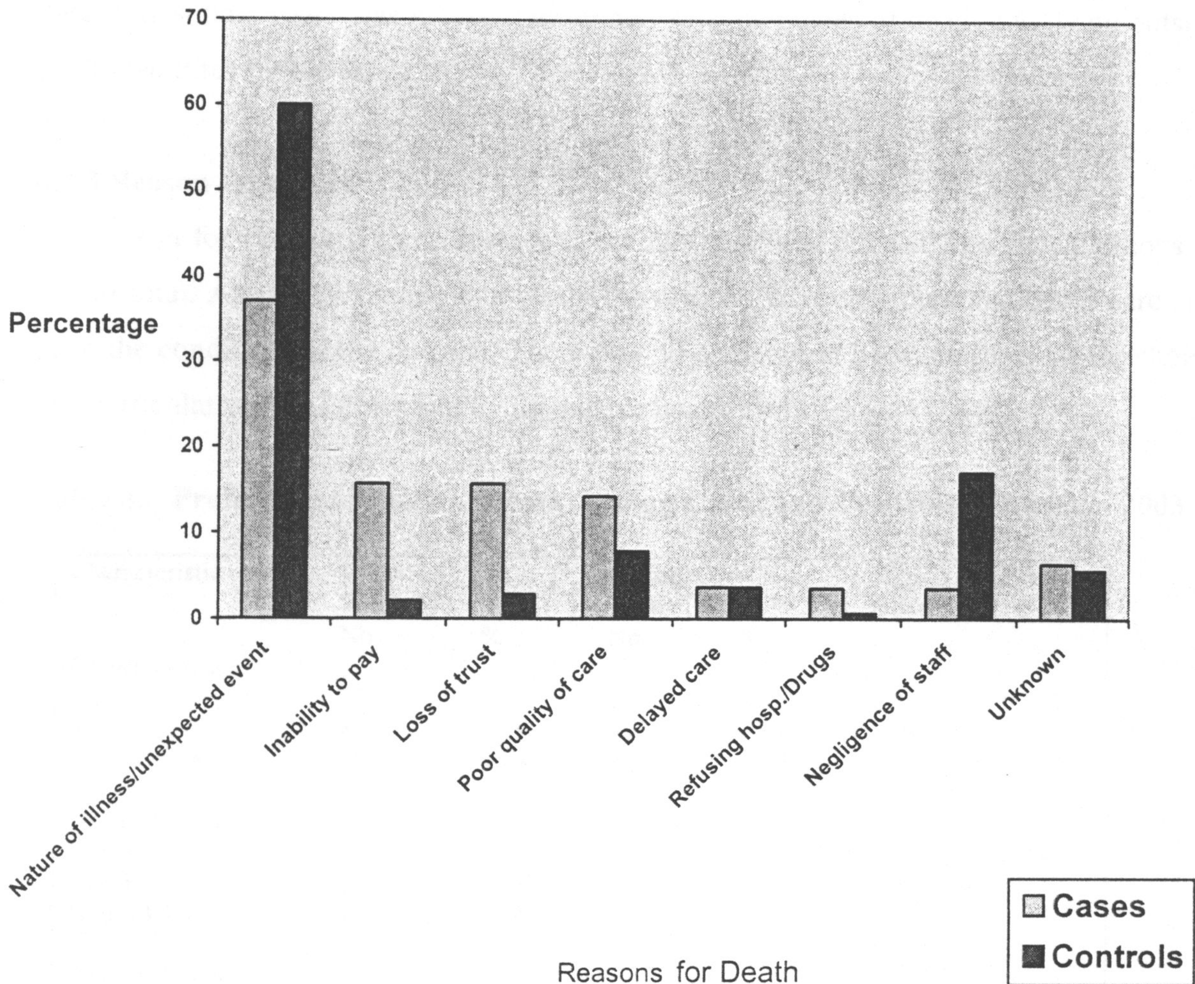
4.2.4 Poisoning

Among the people taking poison, almost a similar number of people among cases (5) and controls (4) took poison by accident, while those that took poison intentionally were slightly more among the controls (5) as compared to only (3) among cases. The poisons that were taken included 20 tabs of chloroquine, panadol tablets, and even rat poison. There was no association between poisoning and dying outside health facilities ($p = 0.637$)

4.2.5 Reasons why People died in and Outside Health Facilities

This study explored reasons for death among cases and controls. Except for HIV/AIDS and cancer, the rest are medical conditions which can be treated and cured. The question that this study explored was 'why did the patient die?' whether at home or in the hospital. The responses are shown in Figure 5. There were various problems that people faced that were reported as reasons why they died. Among the cases, nature of illness/ unexpected events were the most reported reasons attributed to dying outside health facilities (37.1%). Inabilities to pay for transport/medical fees and loss of trust/past experiences influencing the deceased not to go to hospital were the next important factors (15.7%), followed by poor quality of care (14.0%). Among the controls, the majority (60.0%) died due to the nature of the illness/unexpected events they had which could not have been cured. Relatives on the other hand thought that although the patients were brought to the hospital nobody paid much attention so they died of negligence (17.1%). Nevertheless, other important reasons for death in hospital were poor quality of care(8.0%), delayed-care(4.0%) and inability to pay fees or buy drugs(2%), taking third to fifth places respectively. Association did exit between reason for death and dying outside health facilities ($p < 0.001$).

Figure 5: Reported Reasons for Death In and Outside Health facilities in Lusaka



4.3.0 Preference of Place of Death

This study assumed that some people could be dying in or outside health facilities by choice. The results are shown in Table 4.

4.3.1 Choice of Place of Death

About half of the cases (51.0%) and 44.3% of the controls never made any choice. There was no association between choice of place of death and dying outside health facilities ($p = 0.735$).

4.3.2 Name of Choice

Only four of all those who died outside health facilities actually chose to die at home. One of the four had actually chosen to die in the hospital although he/she died at home. Among the controls however, five people chose hospital as their preferred place of death and they died in hospital. There was no association between the places of death and dying outside health facilities (p=0.048).

4.3.3 Reason for choice

The reason for choosing home death was the fact that they did not like the conditions in the hospital. Among the controls however the reasons were that they had better care and liked the conditions at the hospital. There was no association between Reasons for choice of a particular place of death and dying outside health facilities (p = 0.048).

Table 4: Preference of Place of Death Among Cases and Controls in Lusaka- 2003

Characteristic	Cases Total=140		Controls Total=140		Chi-square	P-value
	No.	%	No.	%		
Choice of place						
No	71	50.7	62	44.3	**	0.735
Yes	4	2.9	5	3.6		
Didn't know*	65	46.4	73	52.1		
Name of Choice						
Home	3	2.1	0	0.0	**	0.048
Hospital	1	0.8	5	3.6		
Didn't know*	136	97.1	135	96.4		
Reason for Choice						
Better conditions at					**	0.048
home	3	2.1	0	0.0		
Better conditions at						
Hospital	1	0.8	5	3.6		
			0	0.0		
N/A*	136	97.1	135	96.4		

* Not included in the test of significance because of unknown status
** Chi-squared test is not shown because Fisher's exact test was used

4.4.0 Membership in Home Based-Care among the Study Population

It was also an assumption of this study that members of Home Based Care (HBC) are more likely to die outside health facilities because of health facilities encouraging patient with chronic illnesses without cure to be nursed at home and only come to health facilities

when it was really necessary. In this section those people who were members of HBC are identified in order to try and estimate the contribution of home-based care people to those that die outside health facilities.

4.4.1 Proportion of Members of Home Based Care Programme among the Study Population

Many of the people that died outside health facilities were not members of home-based care. In this study, about two thirds of the cases and more than half of the controls were not members of home based care before they died. Only 10.7% of the cases and 7.9% of the control were members of home based care. Nevertheless there was no association between membership of home based care and dying outside health facilities (p = 0.926).

4.4.2 Care from Home Based Care team

Among the members of HBC 6.0% of cases and 5.0% of controls received food stuffs while 4.0% of each group of cases and controls received medication as their help from HBC team. Association between care being given to members of the home-based and dying outside health facilities did not exist (p= 0.494).

4.4.3 Frequency of Visitation

In terms of visitation, 8 of the 15 among the cases and 7 of the 11 among controls were being visited every two weeks, another 7 among cases and 4 among controls were visited on monthly basis. Test of association between frequency of visitation and dying outside health facilities was not significant (p = 0.901).

4.4.4 Name of Illness for being a member of the HBC

The conditions for which they were put on HBC, 43.0% of the cases and 54.0% of the controls under HBC had TB and 28.0% of the cases and 30.2% of the controls had HIV/AIDS. Condition for being put under HBC and death outside hospital are not associated (p = 0.705).

Table 5: Distribution of Cases and Controls by Home-Based Care Programme Enrollment

Home Based Care	Cases Total=140 No.	%	Controls Total=140 No.	%	Chi-square	P-value
Membership						
No	91	65.0	76	54.3	0.01	0.926
No Idea*	34	24.3	53	37.9		
Yes	15	10.7	11	7.9		
Type of help from HBC team						
Food	8	5.7	5	3.6	1.41	0.494
Medication	7	5.0	6	4.3		
N/A*	100	71.4	117	83.5		
No Idea*	25	17.9	12	8.6		
Visitation by the HBC team						
Two Weekly	8	5.7	7	5.0	0.02	0.901
Monthly	7	5.0	4	2.9		
N/A*	125	89.2	129	92.1		

* Not included in the test of significance because of unknown status

4.5.0 Factors that Limit Access to Health Facilities/Services among the Study Population.

This study hypothesised that a lot of people could be dying outside health facilities due to problems to do with accessibility. Accessibility here refers to both geographical and economical (financial). This section will discuss both sides of accessibility. In a general sense both the cases and controls of the study population did not have problems of geographical accessibility while on the other hand, cases seemed to have had financial accessibility as the greatest hindrance.

4.5.1 Distance to the Nearest Health Facility

Table 6 shows that 48.6% of each group of the cases and controls were staying within 5 km from the nearest health facility. A total of 22.1% of the cases and 34.3% of the controls were staying within 5-9km to a health facility. However there was no significant association between distance and dying outside health facilities (p = 0.254)

4.5.2 What the Health Facilities did when the Patients Attended

This sub-title explains what happened when the patients attended the health facility. From Table 6, 39.3% of the cases and 57.8% of the controls that attended a health facility for

services were given medication, 9.0% of the cases and 15.0%of the controls were given prescriptions. Only 3.7% and 11.4% of the cases and controls respectively were only given appointment before they met their fete. There was no association between action taken at the health facility and dying outside health facilities (p = 0.337).

4.5.3 Fulfillment of Medical Appointment

Appointment is part of the action taken by health facilities when patients attend. Those that the health providers cannot treat they refer or give them an appointment to see a specialized person for their kind of problem. This study found that more cases than controls were able to fulfill their appointments. Up to13 people among the cases and 3 people among the controls really fulfilled their appointments, and the reasons for failure to fulfill appointments were not clear for both groups. Thee was an association between fulfillment of appointment and dying outside health facilities (p = 0.003).

Table 6: Access to Health Facilities of the Study Population in Lusaka in 2003

Accessibility to Health facilities	Cases Total=140		Controls Total=140		Chi-square	P-value
	No.	%	No.	%		
Distance from nearest H/C (km)						
< 5 km	68	48.6	68	48.6	2.73	0.254
5-9 km	31	22.1	48	34.3		
10-39 km	9	6.4	14	10.0		
Unknown*	32	22.9	10	7.1		
Action at health centre						
Given Medication	55	39.3	81	57.9	2.18	0.337
" Prescription	12	8.6	21	15.0		
" Appointment/ Referred	5	3.6	16	11.4		
Not applicable	68	48.6	22	15.7		
Fulfillment of appointment**						
Yes	13		3		9.11	0.003
No	5		15			
Total	18		18			

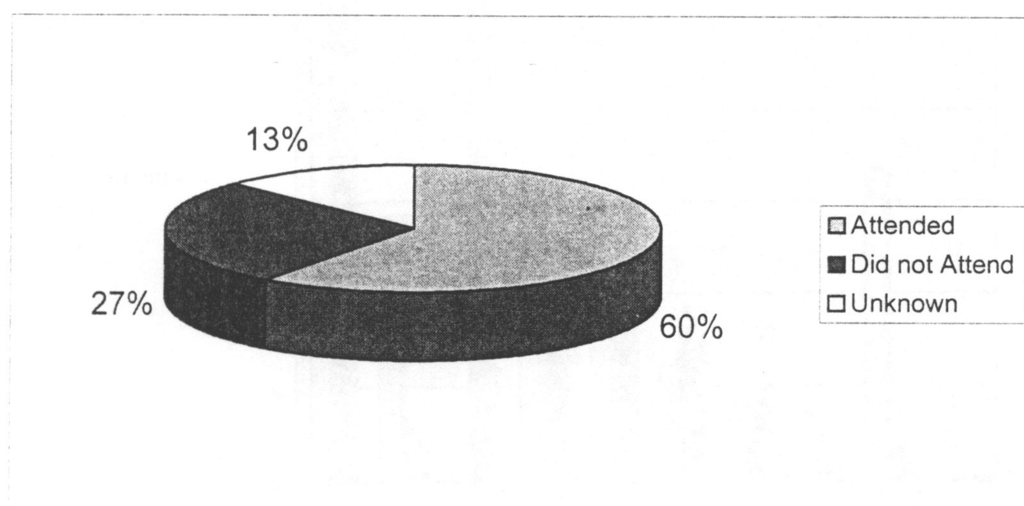
* Not included in the test of association because of unknown status

** Percentages have not been done because n < 30

4.5.4 Attendance to Health Facility Before Death Among the Cases

After knowing their geographical location it was necessary to determine whether they actually went to any health facilities before their death. According to Figure 6, 60.0% of the BIDs had gone to a health facility before they died at home. At least 27.0% of them did not go to any health facility while 13.0% had no idea whether the deceased had been to a health facility or not.

Figure 6: Attendance to Health Facilities Among Cases Before Their Death In Lusaka District In 2003

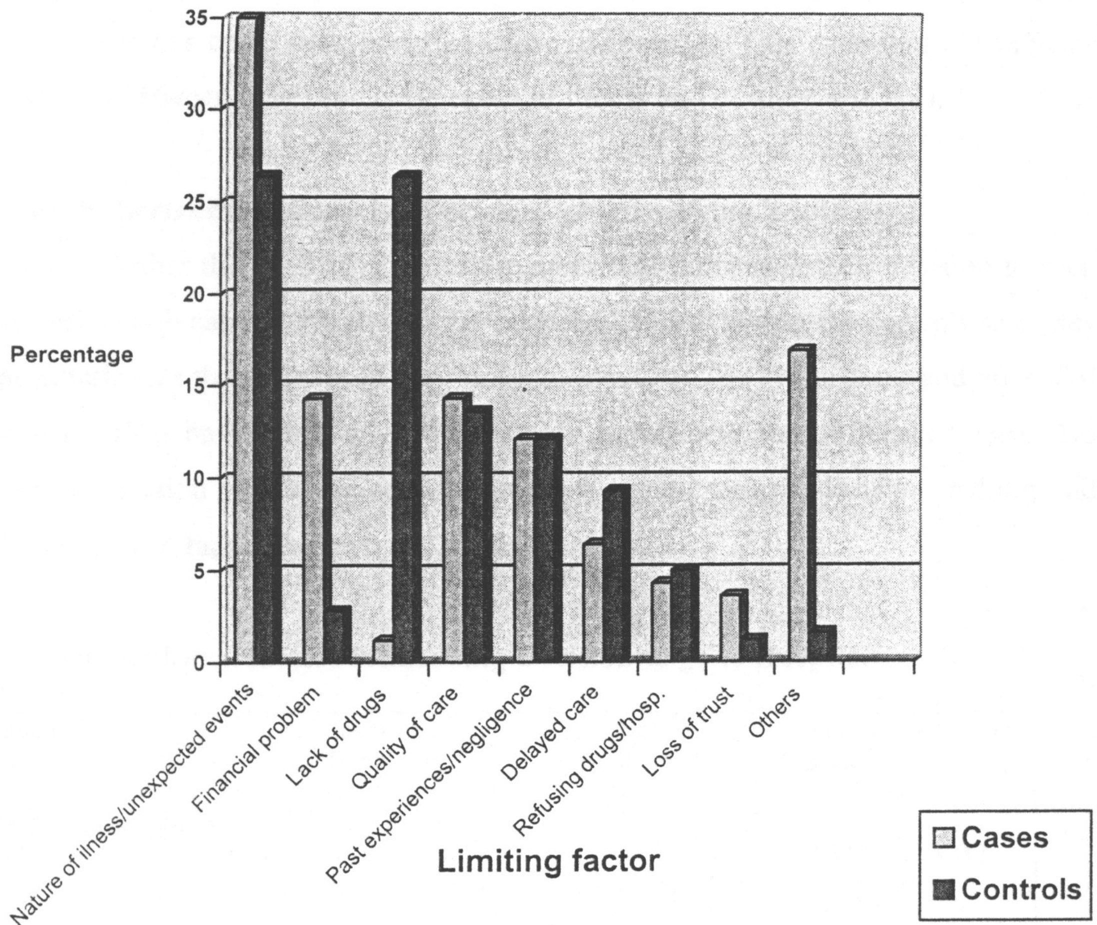


4.5.5 Factors that Limit Access to Health Facilities

It also became necessary to understand what exactly hindered them from accessing facilities/services. This sub-title explains it. The biggest hindrance to access of health facilities or services among the inpatient deaths was nature of illness/ unexpected events and lack of drugs in the hospital with 26.4% for both reasons, of all the people that died in the Hospital. Quality of care with 13.6% was the next in importance followed by negligence with 12.1%. Delayed care was the next with 9.3%, refusing to go to hospital/ take medication and loss of trust were also other significant types of hindrances according to Figure 7. Among cases however, the major hindrance they suffered was unexpected events and the people had no time or opportunity to go to a health facility (35.0%). Next

was (financial problem) inability to pay for fees, transport, Laboratory tests and other services charged at the health facilities and quality of care (14.3%), followed by past experiences (12.1%). The data shows that there was an association between hindrances and dying outside health facility ($p < 0.001$).

Figure7 : Factors that Limit Access to Health Facilities among Cases and Controls



4.6.0 Social Cultural Factors that Determine Health Seeking Behaviour

Social cultural factors refer to beliefs, traditions and cultural practices that influence people‘s behaviour when it comes to decision-making. This study intended to find out whether such factors made a contribution in people dying outside health facilities. This section discusses such factors and the influence they had on the people that died outside in comparison with those that died in the health facilities.

4.6.1 Beliefs about Cause of Illness

Less than five percent of the cases and 12.0% of the controls believed that witchcraft was the cause of the illness. Sixty four percent of cases and 54.3% of controls had no idea what caused the illness in their deceased relative leading to death while eleven percent and fourteen percent of cases and controls respectively believed that the cause of illness were germs or infections. Only 6.4%% of cases and 13.4% of controls believed that the life style of the deceased was responsible. Nearly 5.0% of the cases and 11.2% of controls believed that witches could have been the cause of illnesses. This data does not indicate any association between belief about the cause of illness and death (p = 0.313).

4.6.2 Past Experiences Influencing Decisions about seeking health care.

When asked whether they had any past experiences that influenced their decision to seek or not to seek health care 13.8% among the cases and 26.9% among the controls said they had past experiences that influenced their decision while 52.0% of the cases and 56.9% of the controls denied having had any form of past experiences that influenced them. No significant association was observed between past experiences on decision making and dying outside health facilities, (p= 0.125).

Table 7: Social-cultural factors influencing Decision to go to Hospital

Socio-cultural factors	Cases Total=140		Controls Total=140		Chi-square	P-value
	No.	%	No.	%		
Belief about cause of illness						
Germs caused it	16	11.4	19	13.6	2.32	0.313
Life style	9	6.4	19	13.6		
Witches	6	4.3	16	11.4		
Don't know*	109	77.9	86	61.4		
Past experiences influencing decision						
NO	64	52.0	74	56.9	2.36	0.125
Yes	17	13.8	35	26.9		
No idea*	42	34.2	21	16.2		
Total	123	100.0	130	100.0		

*Not included in the test of significance because of unknown status.

4.7.0 Perceived Quality of Care by the Study Population in Lusaka District- 2003

It was also thought that other people could be dying outside health facilities due to quality of care and advice, which they receive when they go to the health facilities.

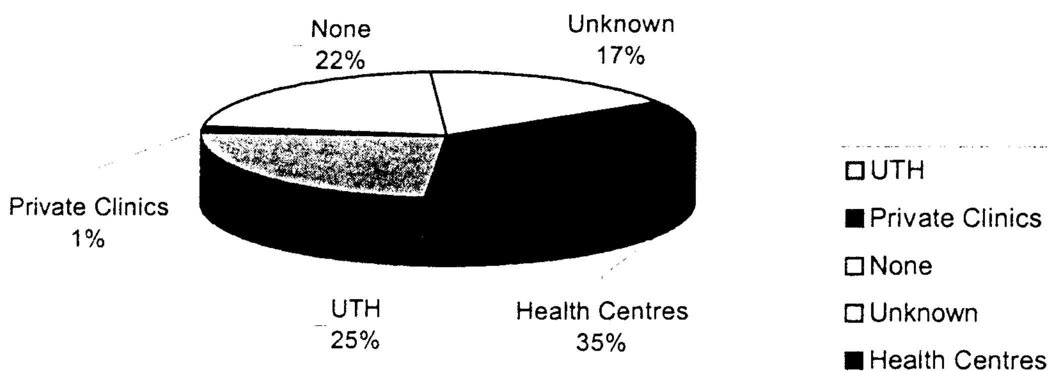
4.7.1 Attendance at Health Facility

When this factor was explored, it was found that; 80.0% of the cases had at one time or another visited a health facility when they got sick, though at various times ranging from the same day to about a month before their death. Only 12.9% were found not to have gone to a health facility. All the controls on the other hand went to the hospital and died in the hospital.

4.7.2 Name of Health Facility Attended

Figure 8 shows that only 21.4% of the cases did not go to a health facility and 17.0% did not respond to the question. That means the rest, which is, 59.3% went to a recognized health facility. The urban health centres together saw a total of 35.0% as compared to UTH, which saw 25.0% of the people who had visited the institution but later died outside a health facility. This shows that at least 60.0% of the people that died outside health facilities actually did make effort to attend a health facility to cure their illnesses but they ended up dying at home. On the other hand, the controls all went to UTH and were admitted there.

Figure 8: Type of Health Facilities Attended by Cases before their Death in Lusaka



4.7.3 Qualifications of personnel that attended to patients

This sub section is intended to have understanding of the qualification of the people that *attend to patients so as to understand the quality of care being given. Well-qualified* Doctors, Clinical officers and Nurses attended to 59.2% percent of the cases and 79.9% of the controls although they still died either in or outside hospital. This data shows an association between the qualification of the person who examined and death ($p < 0.001$)

4.7.4 Advice given at the Health Facility

On advice given, of all those that went to a health facility 52.1% among the cases and 77.8% of the controls were given treatment and/ or prescriptions, only 2.1% of the cases and 1.4% of the controls were told that no problem was found on them. This data shows an association between death and the advice given at the health facility before the deceased died ($p = 0.181$).

When asked about diagnosis, there were more controls than cases that thought that diagnosis was correct. Slightly more than half (50.7%) of the cases and 76.4% of controls thought the diagnosis made on their deceased relatives were correct while 25.0% of the cases and 10.7% of the controls felt that it was not correct. Test of association between correctness of the diagnosis and dying outside health facilities was significant ($p < 001$).

4.7.5 Effectiveness of treatment

The larger part of the study population felt that the treatment given to their relatives was not effective and were not satisfied with it. Table 8 shows that 17.9% of the cases and 9.3% of the controls, thought that the treatment given was helping their patients. Effectiveness of treatment and dying were associated. ($p < 0.001$).

Table 8: Quality of Care and Advice given to the Study Population

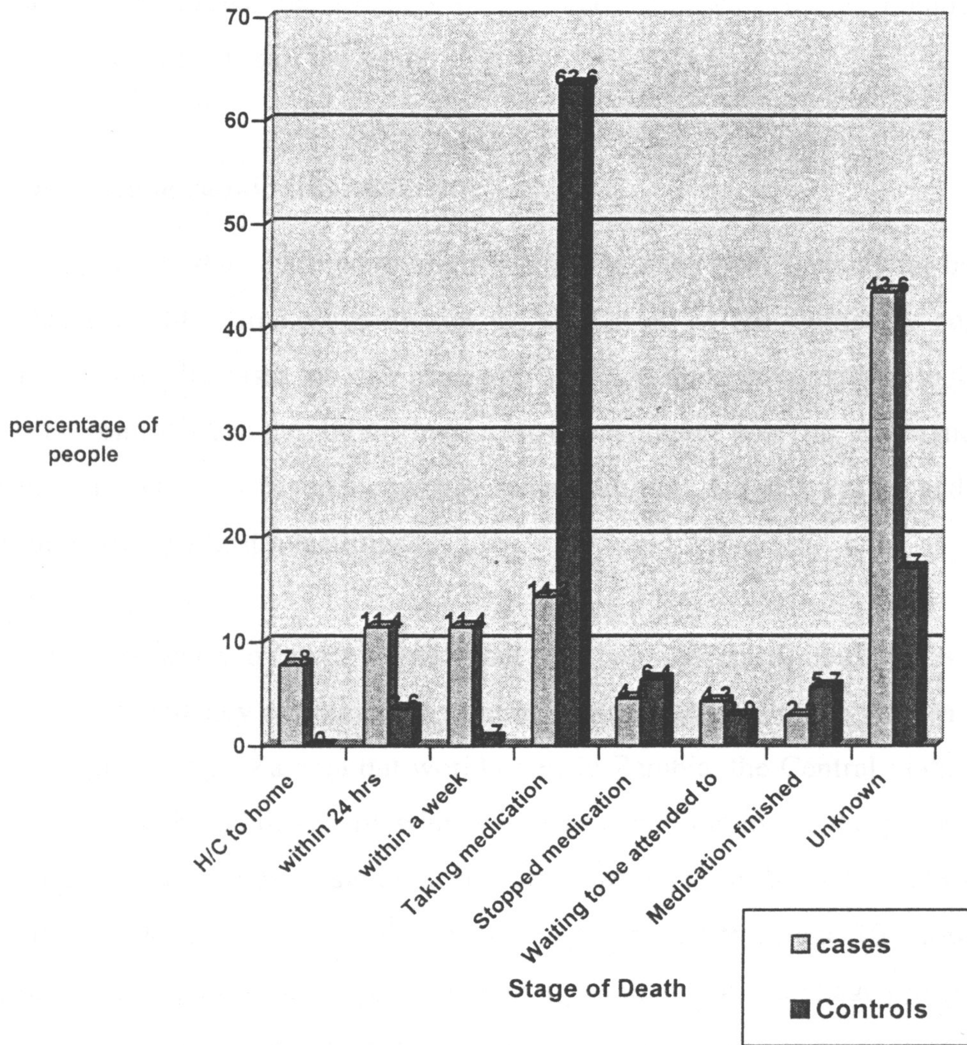
Characteristic	Cases Total=140 NO.	%	Controls Total=140 No.	%	χ^2	P-v
Personnel attending to Patient						
Clinical officer/Nurses	40	28.6	13	9.3	35.95	< 0.001
Doctor/Consultants	43	30.7	113	80.7		
Unknown*	57	40.7	14	10.0		
Advice given at Health Centre						
Appointment	5	3.6	2	1.4	3.42	0.181
Medication/prescription	73	52.2	109	77.9		
No problem found	3	2.1	2	1.4		
Unknown*	59	42.1	27	19.3		
Correctness of diagnosis						
Yes	71	50.7	107	76.4	13.04	< 0.001
No	35	25.0	15	10.7		
No Idea*	34	24.3	18	12.9		
Effectiveness of the treatment given						
Yes	25	17.9	13	9.3	9.74	< 0.001
No	57	40.7	100	71.4		
NO Idea*	58	41.4	27	19.3		

* Note included in the test of significance because of unknown status

4.7.6 Stage of Death

Stage here refers to the point of time at which the individual died from the time they attended a health facility. Figure 9 shows that 14.3% of the Cases and 63.6% of the controls died while still taking drugs. Also, 11.4% of the cases died within a day and a similar number within a week from the time they attended a health care institution. A further 7.8% of the cases died on the way from the health facility were they went to seek care . On the contrary, the controls died more at the time they stopped taking medication on there on (6.4%), and when medication finished (5.7%). An association between stage of death and dying outside health facilities was established ($p < 0.001$)

Figure 9: Stage of Death of Study population from the time of Attendance to a Health facility in 2003 in Lusaka



CHAPTER V

5.0 DISCUSSION

This chapter will discuss the findings of the study following the chronological order according to the objectives of the study.

5.1.0 Socio Demographic Characteristics

This study revealed that there were slightly more women than men dying both in and outside health facilities in Lusaka district. In all that is; 54.3% women as compared to 45.7% men among the cases, on one hand and 52.9% women as compared to 47.1% men among the controls on the other hand. However there was no difference in sex composition between cases and controls. Therefore sex did not really add to dying whether in or outside health facilities.

Nevertheless, this scenario (more women than men being affected) could be as a result of the economic dependency of women on men, a situation that has made women victims of a lot of vices not only in Zambia but world over. In Zambia, the Central Statistics Office (2003) found that the adult survivorship has been deteriorating in the passed 20 years (1980-2000). The deteriorating situation has been attributed to the HIV/AIDS pandemic. Initially 1980-1990, more females than males had survived from age 10. However after 1990, more males than females survived especially in the 15-40 years age group. Females are more prone to HIV infection than males for the same economic reasons coupled with the fact that women could also get infected through nursing AIDS patients, from their spouses and not being able to negotiate safer sex.

Three age groups were important according in this study. The 0-10, 21-30 and 31-40 years age groups were more affected than others for both cases and controls. This picture is not different from that in the 2002 Zambia Demographic Health Survey (ZDHS) report. The first age group (0-10yrs) is high for both cases (20.7%) and controls(18.6 %) probably because of infant and under five mortality rates, which have always been high in Zambia.

IMR was 107 in 1992,109 in 1996 and 95 in 2002, and the under five-mortality rate was 191 in 1992,197 in 1996 and 168 in 2002. (ZDHS, 2002:119). However, the death rate in the 21-30 is 23%and 18% for cases and controls respectively. For the 31-40 years cohort its 17% for cases and 26% for controls, which is more or less the same with the national rate at 22.3%and 27.3%. This cohort has the highest number of deaths among those dying in the hospital probably because of educational level and consequent employment status and have the money to pay for health care while the 21-30 years cohort have the highest number of deaths among those dying outside the health facilities probably because about half of the people in this age group (21-25yrs) are just coming out of high school and getting into college and/or are getting out of college and trying to get employed and some of them have not yet got employed given the unemployment rate in Zambia. Sexual activity is another factor to be considered as both cases and controls in these age groups are the most sexually active and most likely to be infected with HIV/AIDS which has been claiming a lot of lives in the reproductive age group. On the overall however, there was no significant association between age and death and there was no difference in age compositions of the cases and the controls in that both cases and controls were affected in similar age groups. Therefore age as a factor did not contribute anything to death whether in or outside health facilities.

In terms of residence of the people who died in and outside health facilities, there are more people living in the high-density areas (84% of the cases and 73% of the controls) who died both in and outside health facilities both among the cases and controls. This is most likely because these areas have the majority of the urban poor. People with little or no education, unemployed, and generally poor all stay in high-density areas. The national mortality rate of adults in the reproductive age group (15-49 years) is 16.9% and 15.7% for women and men respectively dwelling in urban areas in Zambia as compared to 10.1 and 10.9 % for women and men respectively and an average of 10.4% for both in the rural areas (ZDHS, 2004:241). Thus, mortality rate is higher in the urban areas than in the rural according to the national picture, but in this study the picture is the opposite. The high density areas which in many respects can be compared with rural areas in that they have more people, more poverty prevalent and many people unemployed and uneducated have

more deaths than the medium and low density areas which have higher levels of the same social characteristics. However, since this study was done in Lusaka, where the death rates are highest in the nation, the general picture is correct. Nevertheless the differences in the composition among the cases and controls are not significantly different.

Education was the only socio demographic characteristic which was significantly associated with death in this study. Clearly there were more people (64.2%) with little or no education that died outside health facilities than those that had (45.7%). There were 18.5% more people with little or no education that died outside health facilities. Education as a variable has been an important factor in a lot of things. CSO (2003) found both infant and under five mortality rates higher among mothers with little or no education than those with education. In this study, education also proved its significance. Educated people are more likely to be well employed and afford to pay their medical bills, use preventive measures to prevent the occurrence of disease and also live in a healthier environment than those with little or no education.

5.2.0 Nature of Diseases that the Study Population Died from

This section will discuss the nature of illness the deceased died from. This is meant to have an understanding of whether the kind of illnesses the study populations died from were the cause of dying in or outside the hospital.

5.2.1 Cause of Death among the Cases and Controls

The study found that the nature of diseases that the study population died from were many and variant both among cases and controls. However some were more significant than others. TB was the major cause of death for both cases (16.4%) and controls (19.3%) followed by RTA that was equal 15.0% both for cases and controls although those who died in the hospital were slightly more but the composition did not significantly differ. This picture is consistent with CSO (2004) findings which found mortality due to TB to be highest in urban areas at 18.9% as compared to 8.5 % in rural areas. It was also the highest cause of death in Zambia with 21.4% of people aged between 15 and 24 and 23.2% among those aged between 25 and 39 dying from TB. But what is causing TB to

be the leading cause of death? Most of the TB these days has been complicated by the dual infection nature, which has made it resistant and relapsing thereby killing most of its victims. Dual infections are diseases that have become more prevalent as a result of their interaction with HIV/AIDS. "The association may be either as a result of the disease process enhancing the spread of HIV such as STDs, or HIV leading to an increased frequency of TB". Mwinga (1999) concluded that while some of this increase may be linked to declining socio-economic conditions, the HIV sero-prevalence of 70% in newly diagnosed TB patients puts to co-infection with HIV being paramount.

Road traffic accidents were also found high among both cases and controls. Of all the people that died outside health facilities in Lusaka, 15% among those dying outside were due to RTAs and 15.0% among those dying in the hospital were also due to RTAs. Thus the study population was equally affected by this factor. This is just a true reflection of the picture in Zambia. Many of the victims died immediately after the accidents. Bad roads, over speeding, inability to rash accident victims to health facilities and drunkenness are some of the reasons why a lot of RTAs happen and until measures to combat some of these issues are put in place RTAs will continue and possibly increase in causing deaths in Zambia.

Other important causes were RVD, malaria, poisoning, meningitis and pneumonia. RVD was two times higher among controls (11.4%) than cases (4.3%). This could be so because controls were more likely to have been thoroughly investigated for HIV/AIDS as an underlying cause of their illnesses because they were admitted in the hospital than cases who may not have been investigated so that many did not know their HIV statuses. However, both the cases and controls have shown a lower HIV rate than the national prevalence rate of 20.0%. The clear explanation is that not all patients are tested for HIV.

On the contrary, malaria was two times higher among cases (10.0%) than controls (4.0%), and diarrhoea was at the same level (7.1%) for both cases and controls. Meningitis on the other hand marked among cases(%) than controls. This cannot be surprising because these diseases also fall within the top 10 causes of morbidity in Zambia. Nsemukila (1994)

found that malaria, malnutrition, pneumonia, measles, diarrhoeal diseases and anaemia were among the seven major causes of death among infants and children in Zambia. Nearly 10 years now, the situation is the same. Like for TB, all these illnesses are curable and in other parts of the world, they have been brought under control. Mwanza (2001) also found a similar scenario. This scenario may be due to a confounding factor of HIV infection thereby causing dual infection or that the quality of health care and advice in the health institutions is poor.

5.2.2 Reasons for Death

This refers to the problems that hindered them from either accessing health services or getting cured since being ill in itself does not warrant a death sentence as illnesses can be cured by medical services.

Four main reasons were important for causing people to die outside health facilities. Unexpected events and/ or nature of illness, being the highest cause (37.0%) and inability to pay fees, transport etc being on the same level with loss of trust in hospital/past experiences influencing decision (15.7%). Those that went to hospital and given drugs but went late constitute poor quality of care (14.3%) This can also be called poor quality of care. The controls on the other hand, had nature of disease/unexpected events as their major reason for death (60.0%). Negligence was the other important reason they faced (17.1%) and going to the hospital late, such that even though they got drugs, they could not help them (8%). There is a significant difference between cases and controls for the reasons itemised as reasons responsible for their death. These therefore, explain it. Unexpected events/nature of disease may not be an important cause because it affects both cases and controls but the rest are. It's however the highest cause because it is comprised of incurable diseases such as HIV/AIDS, cancer, and also RTAs where patients and medical personnel alike could not do anything to help the situation.

5.2.3 Stage of Death of Accident Victims

Many of the accident victims died before or immediately after reaching hospital before being assisted by health facilities. This is more likely because they went too late so they couldn't be helped.

Among cases 29.0% died between home and hospital and a similar number died within 24 hours from time of admission among controls. This shows these people died due to the effects of the accident. Probably they were severely injured or they were delayed before being taken to the hospital. It was also a finding of this study that the Police when going to accident sites never carry any equipment with which to resuscitate or do first aid to the accident victims. This could be contributing to the many people dying due to unexpected events.

5.3.0 Preference of Place of Death

The study found that people do not die outside health facilities by choice but difficulties. Only Three percent of cases and Four percent of controls had made a choice of where they wanted to die. Whereas in other places like the western world, people make preferences as to where they would like to die. In both Brazil's study (2000) and McWhinney's study (1995) people that died outside hospital did so as a choice. The factors influencing them to make such a choice are associated with having someone to look after the patient at home, having medical personnel make home visits and the patient making a personal preference at initial assessment by the Doctor. It is very clear that in Zambia people die outside health facilities not because of choice but because of problems and/ or circumstances beyond their own control. As can be seen from the cause of death, the majority being Nature of illness/ unexpected events, and financial problems. This shows that people don't die at home by choice at all. There is no significant difference in terms of the composition of preferences among cases and controls. Therefore choice or preference is not the reason people in Lusaka died at home or outside health facilities.

5. 4. 0 Membership on Home Based Care Programme

It was thought that people could be dying at home because they are on home-based care and so this is what hindered them from going to hospital. The proportions of people dying that are under HBC are only 10.0% among cases and 8.0% among controls. The illnesses for being put under HBC were Tuberculosis and HIV/AIDS. As can be seen, there are a lot of people dying due to TB and RVD. Normally the people who were put under HBC were those with chronic conditions, which are incurable in most cases. The main reason they are placed under home-based care is because they over stay in the hospital and occupy bed space for a long time. Therefore to create space for acute cases in our limited institutions of care, some chronic cases are to be taken care of at home with medical staff visiting them. Nevertheless, when the condition got bad they were expected to go to health facilities without being intimidated because of their conditions. However, this study did not find HBC as a big contributor to people dying outside health facilities. In-fact, those that were under HBC and died outside health facilities did so for other reasons and not necessarily because of being on a HBC programme.

5.5.0 Accessibility to Health Facilities/Services

Financial and not geographical accessibility was the problem for many cases as compared to the controls. There was an equal number of (48.6%) among cases and controls living within 5km from the nearest health facility. On the other hand 22.0% of cases 34.0% of controls lived within five to nine kilometers. This shows that it was in fact the people living near a health facility who died more. This strange phenomenon is because the government normally builds its health centres where there is a dense population. This however, only goes to show that geographical location or accessibility was not an issue in this matter. It did not contribute much to dying whether in or outside hospital. A financial problem on the other hand was most likely to have hindered them from accessing health facilities.

It was further found that 60.0% of the cases had actually gone to a health facility before they died while 27.0% did not go. Therefore, more than half of the people that died attended health facilities though they still died. The causes of death then should be some

thing to do with quality of care and not the patients not going to health facilities when they were sick. Seshamani (2000) found that service quality had deteriorated. The study also found that 39.3% of cases and 57.8% of controls were actually given medication and 8.6% percent of cases 15.0% percent of controls were given prescriptions when they went to the health facilities. Like in distance from health facilities, nearly 50.0% of the cases and almost 60.0% of controls did receive medication when they went to health facilities. The reason they died could only be found in other areas and not on the distance.

5.5.1 Fulfillment of appointments

It was a finding of this study that most of the appointments were fulfilled by cases (13 of the 18 people) as compared to (3 of the 18 people) among the controls. The cases were more likely to fulfill an appointment because they were at home and seeking for care so they were eager to fulfill their appointment hoping things could be better unlike the controls who were admitted in hospital who were not keen because they were under care throughout.

5.5.2 Hindrances to Seeking Health Care

Unexpected events and /or nature of illness and inability to pay were the most important hindrances to seeking health care and it shows magnanimous differences among cases and controls. Among cases, unexpected events or nature of disease (35.0%) was the most significant hindrance. Most of the people under this hindrance were those under RTA and poisoning and incurable diseases. This category died because of the incurable nature of disease and also suddenness of the events that some times did not give the victim opportunity to go to a health facility. However, quality of care and inability to pay hospital fees, meet transport costs and pay for other services were the next significant (14.3%) followed by past experiences/ negligence. This finding is similar to the 2001-2002 ZDHS, which found 21.0% of households that reported a member of the household being denied care from a health facility because they were unable to pay. Lusaka with 40.0% had the highest proportion of household members who failed to pay for medicine. (ZDHS, 2000). Kamwanga et al (1999) also found high proportions of people that said if they fell ill and had no money, they would just stay at home without going to any health institution.

Seshamani (2002) also found that trends in utilisation of health facilities had declined especially as associated with the introduction of user fees. He concluded that propensity to use health care varies with factors such as socio-economic status and distance.

5.6.0 Socio-Cultural Factors Determining Health Care Seeking Behaviour

Although the controls were two times more likely to believe on lifestyle of the deceased (13.6% compared to 6.4%) and witchcraft (11.4% as compare to4.4%) as the cause of illness in their deceased relatives, both groups were almost the same in belief of the germ theory (11.4% for cases and 13.6% for controls). This factor however was non significant in this study. It was found significant by Awasabo and anarfi (1997) in Nigeria. The difference could have been probably because this study was done in town and most people do not live on beliefs.

However, there were 12.0% of the cases and 25% of controls that had past experiences that influenced them to make a decision about going to hospital or not. The controls were two times more influenced by past experiences to go to hospital than the cases. Like in socio-cultural factors, past experiences as a factor was non significant in this study. The people who died outside health facilities could have had bad past experiences like not having adequate attention, losing a close relative due to what they perceived as negligence and so on. Therefore when they remember these experiences, they were hindered because they feared the same old experiences would befall them. The actual experiences that influenced people were not explored and what type of influence they had from these passed experiences were beyond this study.

5.7.0 Quality of Care and Advice

It is not enough to just say someone had access to medical care, but the care must be of quality to be able to help the person seeking the help. It is for this reason that patients are encouraged to go to health facilities because that is where quality health care should be.
On attendance at to health facilities at least 35.0% visited urban health centres nearest to their residential areas, while 25.0% visited UTH before they died, and together 60.0% of all the people really had contact with medical personnel seeking health care, but still died.

All the controls on the other hand went to hospital and died in hospital. Both Blas and Limbambala (2001) and Kamwanga et al (1999) found that there was a dramatic fall in general attendance at both hospitals and health centres following the introduction of general user fees. So all the controls that went to the hospital and were admitted died and the cases that went to seek health care also died. There should be a problem of quality of care related to this scenario.

The actual qualification of the personnel that attended to the patient when they visited the health facilities. clinical officers and nurses together saw 28.5% of the cases and 9.3 % of the controls, while doctors and consultants saw 30.7% of the cases and 80.7% of the controls. This picture is more likely to be a correct presentation of the real situation on the ground because most out patient departments (O.P.Ds) are manned by clinical officers and this is where most cases were attended to, while the wards are manned by doctors and this is where the controls were admitted. There could be some difficulties here in identifying who is a clinical officer and who is a doctor, particularly those that were seen in the urban health centres as most of them are seen by clinical officers. CSO (2004) also found that in Zambia the commonest consulted person by people seeking health care were clinical officers (51.0%), followed by nurse/midwife (19.0%), while doctors rank least (16.0%). However in this study there was no difference in the number seen by doctors and clinical officers among the cases while among the controls the number seen by doctors was two times more than that of the cases. This could have made the significant difference.

However, whether doctor or clinical officer, they are qualified and employed by government to save people's lives. Like in attendance, this goes to prove that thc patients had sought health care from qualified people employed in public institutions of care. Two reasons could explain the problem that occurred to the deceased here. Firstly, it could be that the nature of illness they had could have been incurable so it didn't matter whether the best Doctor saw them or not. Secondly, it could be that the diagnosis made was wrong altogether so the treatment given was not helping them. This is a problem of quality of care that is given in our health facilities in the country. Seshamani (2002) also found that

utilization levels and quality of health services in Zambia between 1992 and 1995 had declined. There has been no proof that quality has improved so far.

Nature of Advice Given to Patients at Health Facilities

In terms of advice given at the health facilities, more than half among both the cases and the controls were given medication, while in 42.1% of the cases and 19.3% of the controls it was not known what type of advice they were given. Those who died after medication was started were higher (77.8%) among the controls than the cases (52.1%). This shows then that the nature of advice could not have been the main problem for cases to die outside the health facilities as there were more controls that died under care in the hospital than the controls.

Correctness of Diagnosis and Effectiveness of Treatment

Relatives to the deceased were asked whether they thought the diagnosis made on their deceased relatives was correct or not. Half of the cases were satisfied with the diagnosis made on their relatives while 76.4% of the controls were affirmative. However when the same people were asked about the effectiveness of the treatment, the satisfaction reduced to 18.0% among cases and only 9.3% among the controls. Those who were unsatisfied increased from 25.0% to 40.7% among cases and from 10.7% to 71.4% among controls. Although relatives to the deceased, or Patients themselves may not be the right people to judge the correctness of the diagnosis and effectiveness of the treatment but they can give an indication of the satisfaction they get from what Doctors and all medical personnel do to them and their relatives. Satisfaction to them means a correct diagnosis and a correct diagnosis to them means one that really knows what is wrong with the patient and therefore helps in giving the correct treatment and cures their medical problems. Thus, results are what bring satisfaction. Results show them that the diagnosis was correct and treatment was effective. In the absence of expert judgment we can take the patient's or relatives' judgment as indicative of the service received.

Stage at which the Patients Died from Time of Illness

An assessment was made to find out when the patients died from the time they attended the health facility. It was found that 8.0% died on the way home from the health facility, 11.0% died within a day from advice and treatment and 14.3% while still taking medication among the cases. It is not obvious what caused the death of these patients. It could be a combination of terminal illness, going to health facility late, and mismanagement. These people may have had terminal diseases, but what is a matter of concern here is the fact that they could go to a health facility and be sent back home, that some died on the way, others at home on the same day and medical staff did not know they were very sick and about to die. The fact that they sent such patients away from a health facility when they needed it most is the source of worry, and cause of loss of trust in health facilities. People who have had such an experience and their relatives and neighbours automatically feel and think that there is no need of going to a health facility when one is ill because they will not give one the necessary help at the time of need.

CHAPTER VI

6.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions of the study are drawn based only on the significant findings of the study and the relevant recommendations are made just after each conclusion has been made. However comments and recommendations on other conditions most affecting the people according to the study findings are also done just to add to the preventive measures that can be taken to improve the situation.

6.1 Socio-Demographic Characteristics

Education was the only social demographic characteristic which was significantly associated with death in this study. There were more people with little or no education who died outside health facilities than inside. Educated people therefore were more likely to be employed and pay for medical fees than those who were not.

Recommendation

Education is an important factor in many issues of development in any nation. The government should therefore put it as a priority and find ways of sponsoring those who cannot afford school fees at least up to high school level. This will change the situation for the better in reducing infant mortality rate, child mortality as well as poverty and many other areas.

6.2 Factors Limiting Access to Health Facilities/ Services

Other than nature of illness and /or unexpected events which affected both cases and controls, Financial accessibility was a problem for cases while lack of drugs in health institutions was a problem for controls. About 14.3% of the cases and had a problem of finances, either for medical fees and buying drugs or transport. Many of these were also less educated, unemployed, and living in high density areas. Those who died in hospital however, suffered lack of drugs in the hospital (27%) and negligence (13%) as their most important hindrances to accessing quality healthcare.

Since 14.0% of the deaths are due to financial inaccessibility to health facilities I recommend that the following be done to address the matter:
Government should as a matter of policy scrap off medical fees for all children up to 15 years as it has done for the very old (above 65 years). Since it is a well known fact that children like geriatrics, are vulnerable, they cannot be employed in gainful employment because of the government policy on child labour. Therefore to reduce the number of deaths among children because of financial inaccessibility, government should make it free of charge. This will increase attendance to hospital/ Health centre and also reduce the mortality levels among the Children.

Government is currently paying medical fees under the Public welfare Assistance scheme (PWAS) for only two percent of the core poor. This is grossly inadequate and should therefore be increased, if the poor, the vulnerable and the underprivileged should be saved from premature death, as many of them cannot afford to pay.

To the Lusaka Urban District Health Management Team (LUDHMT) my recommendation is that Since the government has put in place a PWAS for those who are vulnerable, DHMT should work hard to sensitise the people about the existence of such a facility for those who cannot afford payment, more so, for those with chronic illnesses like TB, HIV/AIDS and Cancer.

They should also change the point at which money is collected from the patient because right now, money is collected at the registration desk. Someone pays for scheme or consultation and book or both, then they are supposed to go to the consultation room after which they could go to the laboratory, at which point they must pay again for examination, or they might go straight for collection of medication. I f this is an AIDS patient, they will first collect money from the patient, as the patient cannot go on telling the Cashier not to make them pay because they are HIV positive.

6.3 Quality of Care and Advice

The majority of the people that died outside health facilities had been to a health facility and had been advised in one way or another. Three factors were significant here. Firstly was the attendance to health facilities. While there were 60.0% of those who died outside health facilities attended health facilities before death, all their counter parts who attended and died in the hospital under the care of health personnel. Secondly, the personnel that attended to the people that died outside the hospital significantly differed from those who attended to those who died in the in the hospital who constituted mostly of doctors. Thirdly is the correctness of the diagnosis. There were more people among these who died in the hospital that were satisfied with the diagnosis than those who died outside, probably because they were predominantly attended to by highly qualified personnel than those who died outside. More than half of the people that went to the health facilities were given medication and/or prescription to buy medication although they still died outside health facilities. On effectiveness of the treatment however, those who died outside health facilities were twice more satisfied than their counter parts in the hospital. All these contributed to the problem of the quality of care.

The study found that nearly 7.4% of the people that went to hospital were given treatment and sent back home, but died on the way. Up to 16.2% of the people that went to hospital, were given medication, and sent back home but died within 24 hours; and 24.0% of all that went to hospital, were given medication but died within a week. A further 29.4% died while taking medication. All these added together constitute more than 70.0% which can be said to have died due to problems of diagnosis and wrong advice at health facilities. Therefore, it can be said, of the people that died outside health facilities, that they normally did seek health care but were probably mismanaged and ended up dying as a result of the mismanagement or the conditions they had could no be cured if they were HIV/AIDS related which currently affects 16.0% of our population according to central statistics office.

Recommendations

I recommend that qualified health personnel should be equally distributed among the available health facilities rather than heaping all the highly qualified in one place like is the case with UTH in comparison with urban health centres which either have one medical doctor or non at all. If health centres are equipped with better qualified personnel, and equipment for diagnosis and treatment it will help in speeding up the management of illnesses, reduce death rate due to poor management, reduce on those who get referred to UTH, and there by reduce the current congestion at UTH.

My recommendation to health care providers is that there may be an improvement in the quality of care and service they provide. As it has been seen that people could be given medication and end up dying the same day, a week latter and some are even told they have nothing wrong with them. This acts to discourage people from attending health care services. There should therefore be an improvement in diagnosis and treatment or quality of care in general There is need to increase bed space from the current eight health centres with 30 beds each of the 28 health centers currently under LUDHMB, and one referral hospital as this is the cause of discharges or sending people back from hospital even when they are very sick just in order to create space. The solution is in building more hospitals.

On the other hand, the controls mainly died of nature of illness and/ or unexpected events. About 23. % were due to unexpected events which included RTA and poisoning, while 37.0% included incurable illnesses, mainly HIV/AIDS related TB and cancer. Negligence with 13.0% was the next major killer.

Recommendations concerning issues of HIV/AIDS and RTA have already been given earlier.

6.4 Nature and Type of Death Among the Study Population

The nature and type of death among the study population was not significant in explaining why some people died inside and others outside the hospital. Death after illness and unexpected death were found both among the cases and controls. From the type of

illnesses however, TB was the highest ranking, followed by RTA for both cases and controls. The most important reason for this was the dual infection nature of the TB in recent times. In fact TB is the highest killer of HIV/AIDS infected people world wide. An equally high killer in Zambia was the RTA, which has always been high in Zambia. This could be attributed to fewer number of roads in the country as the population and number of vehicles have been increasing rapidly without a corresponding increase to the number of roads. Added to the number is the bad state of the roads. As people go on dodging potholes they end up causing accidents. Over speeding and drunkenness also add to the number.

Recommendations

Because 15.0% of deaths in and 15.0% outside health facilities were due to RTAs there is need for action to strengthen the traffic rules in the country. It is therefore a recommendation of this study that:

Government should have a serious policy as regards road maintenance and traffic rules as bad roads, drunkenness and over speeding are some of the problems that cause RTAs. In order for government to raise money they should create toll gates on all major routes so that everyone who passes there pays and that money to be used strictly for road maintenance.

I also recommend to the government and all health care providers that there is need to improve on the management of chronic infections and opportunistic infections in people with Ritral viral disease (RVD) as the underlying cause of their illness since a lot of illnesses become difficult to cure when there is dual infection. Tuberculosis, meningitis pneumonias are good examples here. The government should do three things in this area. Firstly, to make HIV testing as routine to all those that for health care in order to help identify dual infections and manage them quickly and correctly. This is for the good of the patient. Secondly, there should be a deliberate policy to make available Anti Retro Viral drugs (ARVs) in the country to be used for managing known RVD and all dual infections. Thirdly, the access to ARVs should be increased by spreading it to all levels of health facilities and not just at specialised levels, as is the case now.

As for the age parameter, those who died outside hospital were 10years younger than those who died in hospital. The peak age group for cases was the 21-30 years, while for controls was 30-40 years. These are the age groups most affected by the HIV/AIDS virus because of their sexual involvement or activity.

6.5 Recommendations For Further Research

It is a finding of this study that many people had some form of influence from past experiences in making a decision to seek health care. Needless to say that they were both negative and positive ones. However, this study did not find out what exactly these experiences and influences were.

It is therefore my recommendation that further research in the area of past experiences and their influence on health seeking behaviour of patient be done. Another important area will be the Quality of care and its influence on health seeking behaviour. A lot of people were in contact with health care institutions and were given medication and advise of some kind but still died. It will therefore be necessary to find out quality assurance issues within the institutions of health care in Zambia

REFERENCES

Asindi A. A, Ibia E. O. and Udo J. J.: Mortality patterns among Nigerian children in the 1980s; Journal of Tropical Medicine and Hygiene 1991; 94: 152-155

Awasabo-Asare, K. and Anarfi, J, K., Health seeking behaviour of persons with HIV/AIDS in Ghana, Supplement to health transition Review 1997; 7:243- 256.

BID Certification Office, UTH; 2002.

Blas, E. and Limbambala, M., User payment, decentralisation and service utilisation in Zambia; Health policy and planning 2001; 16, supplement 2: 29 - 43

Brazil, K., Bedard, M., and Willison, K. Factors associated with home death for individuals who received home support services: a retrospective cohort study; Biomed Central 2002; 1:2

Bruera, E, Russell N, Sweeney C, Fisch, M,J. Palmer,L. Place of Death and Its Predictors for Local Patients Registered at a Comprehensive Cancer Center; Journal of Clinical Oncology, 20, 2002: 2127-2133

Burge, F, Lawson, B, and Johnston G; Trends in the place of death of cancer patients, 1992–1997; Canadian Medical Association Journal. 2003; 168 (3): 265–270.

CBoH, Health institutions in Zambia: A listing of Health facilities according to levels and location, 2002: 2-3

Chintu, C and Watt, T. Child deaths in Lusaka, East African Medical Journal 1982; 59: 645-651

Central Statistical Office (Zambia), Living Conditions in Zambia- 2002-2003; Living Conditions Monitoring Branch; 2004: 54 - 115

Central Statistical Office (Zambia), Living Conditions in Zambia- 1998; LCMB; 1998:119

Central Statistical Office (Zambia), Zambia 2000 Census of Population and Housing; Zambia analytical Report; CSO 2003; 10 : 21

Central Statistical Office (Zambia), Central Board of Health (Zambia),and ORC Macro. Zambia Demographic and Health Survey 2001-2002. Calverton, Maryland, USA: Central Statistical Office, Central Board of Health, and ORC Macro 2003: 119-245

Government of the Republic of Zambia, Public Welfare Assistance Scheme Guidelines; GRZ 2000.

Government of the Republic of Zambia, Health facilities in Zambia, 1995: 1

Health information system: Annual BID Report; UTH 2001&2002.

Hjortsberg, C., Seshamani, V., Poverty, equity, health and health seeking behaviour in Zambia in Seshamani, V, Mwikisa, C.N.& Odegaard, K. (edts), Zambia's Health Reforms selected papers; 1995-2000, 2002:55.

Kamwanga, J., Macwan'gi, M., and Vander Geest, S., Health Reforms and the quality of health care in Zambia. Amsterdam: Het Spinhuis publishers, 1999: 67-76

Kemp J, et al Population-Based, death-scene investigation study of sudden infant death Syndrome and Related Deaths; Pediatrics. 106 No. 3 2000, p. e41

LUDHMB, Action plan and budget for the year 2004.

Mc Whinney, I. R., Factors associated with location of death (home or hospital) of patients referred to a palliative care team; Canadian medical association journal 1995; 152: 361-367.

Mpundu, M, Zambia AIDS and Tuberculosis News- Health Line

Mwanza, J. Audit of bodies brought in Dead to UTH in April –September, (Dissertation); 2000.

Nsemukila, G, Maternal and Child Mortality in Zambia: Determinants and trends 1965-1992. 1994.

Seshamani, V. Trends in the utilisation and quality of health services in Zambia; 1992-95. In Zambia's Health Reforms selected papers 1995-2000; 2002:55.

Tolle,S,W, Rosenfeld A, G, Tilden,V,P, Park,Y, What determines where people die and satisfaction with decisions on place of death? Annals of Internal Medicine 1999: 130 : 681- 685

UNDP, Zambia human development report. 1999/2000

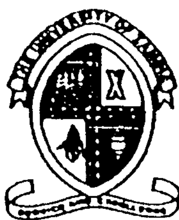
Vicary R. F. Infant mortality in the Gwembe Valley: in Medical Journal of Zambia 1974:19

Wendle, J, government spending on Health care and education under structural adjustment: The development in Zambia during the 1990s, Lund papers No 48,Lund, 1995: 50-53

WHO, World mortality in 2000: Life tables for 191 countries, Geneva 2002: 504-505

Zambia human rights report: Economic, Social, and Cultural rights; 2001

Appendix I: Approval from Research Ethics Committee



THE UNIVERSITY OF ZAMBIA

RESEARCH ETHICS COMMITTEE

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Dean's Office
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Assurance No. FWA00000338
IRB00001131 of IOR G0000774

Ref: 011-01-03
15 May, 2003

Mr Samuel E. Banda, B.SW, Dip. Clinical Med
Department of Community Medicine
School of Medicine
University of Zambia
LUSAKA

Dear Mr Banda,

RE: SUBMITTED RESEARCH PROPOSAL

The following research proposal was presented to the Research Ethics Committee Meeting on 29 January, 2003. We would like to acknowledge receipt of the corrected version. The research proposal has been approved. Congratulations!

Title of proposal: 'Factors associated with death outside health facilities in Lusaka'

Conditions:

- This approval is based strictly on your submitted proposal. Should there be need for you to modify or change the study design or methodology, you will need to seek clearance from the Research Ethics Committee.
- If you have need for further clarification please consult the Research Ethics Committee. Please note that it is mandatory that you submit a detailed progress report of your study to this committee every six months and a final copy of your report at the end of the study.

Yours sincerely

Prof. J. T. Karashani, M.B., Ch.B, Ph.D
CHAIRMAN
RESEARCH ETHICS COMMITTEE

Date of approval: 15 May, 2003
Date of Expiry: 14 May, 2004
Please note that when your approval expires, you will need to request for renewal. The request should be accompanied by a progress report.

Appendix II: Approval from Graduate Studies Committee

The University of Zambia
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Telephone: 290258/291777
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P O Box 32379
Lusaka, Zambia
Your Ref:
Our Ref:

17 October 2003

Mr Samuel E Banda
Department of Community Medicine
School of Medicine
UNZA

Dear Mr Banda

RE: MASTER OF PUBLIC HEALTH RESEARCH (MPH) PROPOSAL

Your research proposal for the Master of Public Health (MPH) entitled: ***"Factors associated with death outside health facilities in Lusaka"*** was presented at the 81st meeting of the Board of Graduate Studies held on Friday 26th September, 2003.

I am pleased to inform you that the proposal was approved by the Board. You can proceed to Part II of the programme and your Supervisor is Dr M Macwan'gi and your Co-supervisor is Dr S Nzala.

I wish you every success in your studies.

Yours sincerely

Professor Shamitiba B Kanyanga
DIRECTOR

cc
Dean, School of Medicine
Head, Department of Community Medicine
Assistant Dean (PG), School of Medicine
Dr M Macwan'gi
Dr S Nzala, Department of Community Medicine

Appendix III: CONSENT FORM FOR RESPONDENTS (CASES AND CONTROLS)

Consent Letter

Dear Respondent,

This letter serves to ask for your permission to participate in a research that is currently going on concerning people dying outside Health Facilities and in the hospital in order to establish the exact problems that they had in accessing health care, leading to death.
The researcher does not need your identity when you participate and will make sure that the information you give out will be treated with the strictest confidence it deserves.

You also have the write to withdraw from the research at any time you feel like.
If you accept to participate, please sign below before the researcher starts interviewing and filling in the questionnaire.
Thanking you in anticipation for your co-operation in this time of bereavement.
Signature (Respondent) ....
Participant.. Interviewer ....

Note: If the respondent does not know how to read and write, indicate "Agreed" on the space provided for the participant signature.

Appendix iv: QUESTIONNIARE FOR CASES

For official use only

A. Bio data

1. Sex of the deceased 1. Male 2. Female [ ]
2. What was the age [ ] [ ]
3. Residential area (compound) .... [ ]
4. What was the occupation .... [ ]
5. Highest educational level attained .... [ ]

B. NATURE AND TYPE OF DEATH AND DYING OUTSIDE HEALTH FACILITIES.

6. What was the cause of death for the deceased? [ ]

(1) Road traffic accident (2) Murder (3) Poisoning (4) Acute medical condition (specify)........

(5) Chronic illness (specify) .... (6) Others (specify) ....

For deaths due to RTA

7. Where did the accident occur?................ [ ]
8. At what stage did the deceased die?.......... [ ]

(1) Instantly after the accident.

(2) 10 – 30 minutes after accident.

(3) While waiting for help after the accident.

(4) On the way to the Hospital.

(5) While being interviewed by the Police.

(6) While being attended to at the Hospital.

9. How long did it take the Police or any form of help to arrive at the scene of the accident? [ ]

(specify)..............

10. When the Police came to the scene of the accident, what equipment /instruments did they have [ ]

(1) First aid kit

(2) Ambulance with medical personnel

(3) Just Police care and officers

(4) No medical equipment was seen at the accident scene

(5) Others (specify)

11. What did the Police do when they came on the scene of accident? [ ]

(1) Gave first aid (2) Called for Ambulance (3) Just took statements from victims and people

around (4) sent the victims to Hospital (5) Others (specify).........

12. From the time the Police came, how long did it take to send the victims to the Hospital? [ ]

(1) Within 10 minutes

(2) Within 10 – 20 minutes

(3) Within 20 –30 minutes

(4) Within 30 – 1 hour

(5) After 1 hour

(6) Others (specify)

Cases of Poisoning

13. When you discovered the deceased had taken poison, what did you do? [ ]

(1) Applied first aid

(2) Rushed to the health facility

(3) Others (specify)................

14. When you came to the Hospital, what was done for the patient? [ ]

(1) Was helped immediately

(2) Was told to wait for the Doctor

(3) Others (specify)..........

15. At what stage did the deceased die? [ ]

(1) While at home

(2) Between home and clinic

(3) Between clinic and UTH

(4) While waiting for the Doctor at UTH

(5) While being attended to at UTH

(6) Others (specify)........

16. What medical condition did the deceased die from? [ ]

(1) Heart attack

FOR THOSE WITH ACUTE MEDICAL CONDITION (2) Stroke

(3) Asthmatic attack

(4) Others (specify)...............

17. Did the deceased have a similar problem before? (1) Yes (2) No [ ]

18. What was done about the condition to prevent death?... [ ]

19. Why did the victim have to die outside health facilities? ....

C. LACK OF ACCESS AND DYING OUTSIDE HEALTH FACILITY.

20. How far was the deceased staying from the nearest health facility? [ ]

1. Within 5 km. 2. 5-9 km. 3. 10-19 km. 4. 20-39 km. 5. 40-59 km 6. 60+ km.

21. When the deceased fell sick, did he or she , or any body take him or her to a health facility? 1. YES. [ ] 2. NO . [ ] [ ]

22.If yes, in Q21 what did they do at the health facility [ ]

1. Gave medication. 2. Did not have drugs. 3. gave a prescription .

4. referred him/ her 5. was given an appointment for another day.

6 other specify) ....

23. If no in Q 21, what was the problem? [ ]

(1.)Did not have money for; 1.user fees 2. transport 3. other services (specify) ......

(2.) Because he or she didn't like the way health staff treated him or her at the health facility.

24. He lost trust in the facilities because of ; [ ]

1. poor quality of service.

2. absence of drugs many times we go there.

3. delayed care.

4. Because of his/ her traditional belief.

5. Because of the long distance from the facility.

6. Others (specify)...

7. Not Applicable.

25. If the deceased died in hospital, tick the correct statement. [ ]

1. Died while taking treatment.

2. Died while waiting to be seen by doctor/ consultant.

3. Died after a long period of admission in hospital/ clinic.

4. Died in hospital premises while waiting to be attended to.

26. What belief did the deceased have about the illness? [ ]

1. Germs caused it

2. It was caused by witchcraft.

3. Because of his/ her life stele

4. Did not know.

5. Other (specify)...

C. HOME BASED CARE AND DYING OUTSIDE HEALTH FACILITY.

27. What illness did the deceased die from? (Specify).................................... [ ]

28. Do you know anything about whether he/she was put under [ ]

home based care? 1. YES. [ ] 2. NO. [ ]

29. How long was he/ she sick before dying. [ ]

1. Less than a month. 5. 1-2 years

2. 1-4 months 6. 2.5- 5.

3. 5-9 months 7. more than 5 years.

4. 10-12months

30. Was the deceased's dying at home something to do with being a member [ ]

of the home based care? 1. YES. [ ] 2. NO. [ ] 3. other (specify) 4. N/A

....

31. If no in Q17, then what could be the explanation? [ ]

1. Taking self-medication at home.

2. We went to seek help from traditional healer.

3. Tired of coming to clinic/ hospital

4. N/A.

32. If the deceased died in the hospital, what do you think was the cause? [ ]

1. Problem was with patient not taking medicine.

2. It's just the type of disease he/ she had.

3. came to the clinic/ hospital when it was too late 4. N/A.

D. CHOICE OF PLACE OF DEATH AND DYING OUTSIDE HEALTH FACILITY.

33. Did the deceased make any choice regarding where he/she would like to die from? 1. YES. [ ] 2. NO. [ ] [ ]

34. If yes in Q 33, what was the choice? 1. home 2. hospital 3. other (specify) 4. N/A. [ ]

35. Where choice of place of death was made by deceased, why do you think such a choice was made? [ ]

   1. He/ she didn't like the conditions at the hospital.
   2. Didn't like the environment at home.
   3. Had better care at home
   4. Had better care at hospital.
   5. Because the illness was chronic.
   6. Because there was no treatment at the hospital
   7. N/ A.

36. Was the deceased's place of choice of death fulfilled?
1.YES.[ ] 2.NO. [ ] [ ]

37. If no in Q 36, why was it not fulfilled? (specify).................................. ...... [ ]

E. KNOWLEDGE OF DISEASE AND DYING OUTSIDE HEALTH FACILIY.

38. Did the deceased know the actual disease he/ she was suffering from? [ ]
1. YES. [ ] 2. NO. [ ]

39. If he or she knew, what did he or she say it was? (specify)..................... [ ]

40. If yes in Q38, what did he/ she do about it? [ ]

   1. Went to a health facility.
   2. Decided to just stay at home
   3. He/ she thought it would stop on it's own.
   4. Other (Specify) ....

41. If he or she knew the type of illness, what was the source of the knowledge? [ ]

   1. Health facility
   2. Relatives and friends.

3. Traditional beliefs

4. Witch Doctor's/divination.

5. Past experience with similar disease.

6. Had seen a similar disease with someone else before.

42. Did he/ she know/ say how dangerous it was? (the disease).

1. YES [ ] 2. NO. [ ] [ ]

43. What was dangerous about it or the dangerous sign of the disease? (Specify).. [ ]

44. Was death at home something he/she decided or you didn't know it would happen like that? 1. YES. [ ] 2. NO [ ] [ ]

G. POOR DIAGNOSIS AND ADVICE, AND DYING OUTSIDE HEALTH FACILITIES

45. When was the last time the deceased went to a health facility? .... [ ]

46. Name the health facility the deceased went to before dying... [ ]

47. What was the advice given? [ ]

(1) Given treatment

(2) Given an appointment

(3) Given a prescription to buy medicine.

(4) Was told that he/she had no problem.

(5) Others (specify)...........................

48. At what stage did the deceased die? [ ]

(1) On the way home from the health facility.

(2) Within a day after advice from the health facility.

(3) Less than a week after advice from the health facility.

(4) After running out of medicine.

(5) While still taking medication given at the health facility.

(6) When he/she stopped taking medication.

(7) Others (specify)...........

APPENDIX V: QUESTIONNIARE FOR CONTROLS

For official use only

A. Bio data

1. Sex of the deceased 1. Male 2. Female [ ]
2. What was the age [ ] [ ]
3. Residential area (compound) .... [ ]
4. What was the occupation .... [ ]
5. Highest educational level attained .... [ ]

B. NATURE AND TYPE OF DEATH AND DYING IN HEALTH FACILITIES.

6. What was the cause of death for the deceased? [ ]
   (2) Unexpected events (a) Road traffic accident (b) Murder (c) Poisoning (d) suicide
   (3) Acute medical condition (a) Asthma attack (b) stroke (c) Heart attack
   (4) Chronic illness (a) Cancer (b) HIV (c) TB (d) Others (specify) ....
   (5) Unknown (5) others (specify)................................
7. Where did the accident occur?................. [ ]
8. At what stage did the deceased die? [ ]

<u>For deaths due to RTA</u>

(1) 10 – 30 minutes after arriving at the hospital.
(2) While waiting to be attended to in the hospital after the accident.
(3) While being attended to at the Hospital.
(4) Within a day after admission
(5) More than a day after admission

9. How long did it take for the Police or any form of help to arrive at the scene of the accident? (specify).............. [ ]
10. When the Police came to the scene of the accident, what equipment /instruments did they have? [ ]
    (1) First aid kit
    (2) Ambulance with medical personnel
    (3) Just Police care and officers

(4) No medical equipment was seen at the accident scene

(5) Others (specify)

11. What did the Police do when they came on the scene of accident? [ ]

(2) Gave first aid (2) Called for Ambulance (3) Just took statements from victims and people around (4) Sent the victims to Hospital (5) Others (specify).........

12. From the time the Police came, how long did it take to send the victims to the Hospital? [ ]

(7) Within 10 minutes (2) Within 10 – 20 minute s(3) Within 20 –30 minutes

(4) Within 30 – 1 hour(5) After 1 hour (6) Others (specify)

13. When you discovered the deceased had taken poison, what did you do? [ ]

(4) Applied first aid (2) Rushed to the health facility

For Cases of Poisoning (3) Others (specify)................

14. When you came to the Hospital, what was done for the patient? [ ]

(4) Was helped immediately (2) Was told to wait for the Doctor

(3) Has been on treatment ever since until he/She died

(5) Others (specify)..........

15. At what stage did the deceased die? [ ]

(7) While waiting for the Doctor at UTH (2) While being attended to at UTH

(3) Within 24hours of admission (4) Within 2 days of admission

(5) Between 3-7 days (6) After 7 days (7) Others (specify)........

16. What medical condition did the deceased die from? [ ]

(5) Heart attack (2) Stroke (3) Asthmatic attack (4) Others (specify)..............

FOR THOSE WITH ACUTE MEDICAL CONDITION 17. Did the deceased have a similar problem before? (1) Yes (2) No [ ]

17. How long did the patient stay in the hospital before dying?.............. [ ]

18. Why did the patient die in the hospital?(cause of death)................. [ ]

C. LACK OF ACCESS AND DYING INHEALTH FACILITIES.

19. How far was the deceased staying from the nearest health facility? [ ]

1. Within 5 km. 2. 5-9 km. 3. 10-19 km. 4. 20-39 km. 5. 40-59 km 6. 60+ km.

20. When was the deceased admitted to the hospital? (specify).............. [ ]

21. Since the patient was admitted what did they do to treat the disease? [ ]

(1) Seen by a doctor (2) Still waiting to be seen by a doctor (3) Gave medication.

(4) Did not have drugs because they were out of stock. (5). Gave a prescription.

(6). Referred him/ her to a consultant and was given an appointment for another day.

(7) Waiting for some examination/ test to be done.

(8) Others (specify)..

22. When was the above action done (specify) .... [ ]

23. Since the patient was in the hospital and being attended to what caused the death in your view?

(1) The nature of the disease

(2) Negligence of staff

(3) Delayed care

(4) Poor staff attitude

(5) Loss of trust in the hospital

(6) Poor quality of care

(7) Was refusing/ failing to take medication

(8) Others (specify)................

24. If it was because of loss of trust, what exactly made him/her lose trust [ ]

1. Poor quality of service.
2. Absence of drugs many times we go there.
3. Delayed care.
4. Because of his/ her traditional belief.
5. Because of the long period of staying in the hospital.
6. Others (specify)..
7. Not Applicable.

25. If it was poor staff attitudes, what exactly was the cause? [ ]

(1) Because of stigmatisation of the disease he /she had

(2) Because of negligence of the staff in the past times he/ she went to the facility

(3) Because of the poor way the health staff use when communicating to patients

(4) Not Applicable

(5) Others (specify)

26. If it was negligence explain one thing that shows there was negligence [ ]

27. If it was because of the poor quality of care what shows this fact? [ ]

(1) Absence of drugs since we got admitted there.

(3) Delayed care.

(4) Patient not responding to treatment

(5) Poor conditions in the hospital itself

(6) Inadequate staff in the ward.

(7) N/A

(8) Others (specify)

28. What belief did the deceased have about the illness? [ ]

1. Germs caused it

2. It was caused by witchcraft.

3. Because of his/ her life style

4. Did not know.

5. Other (specify)..

D. HOME BASED CARE AND DYING IN THE HEALTH FACILITY.

29. What illness did the deceased die from? (Specify).................................... [ ]

30. Do you know anything about whether he/she was put under home based care? [ ]

1. YES. [ ] 2. NO. [ ] 3. No knowledge. [ ]

31. Why was the deceased brought to the hospital if he/ she was a member of Home Based Care? [ ]

(1). Medication had finished.

(2). He/ She had no care at home.

(6) The patient chose to come to the hospital

(7) To serve his/ her life

(8) Others (specify)..............

(9) N/A

32. How long was he/ she sick before dying. [ ]

(1). Less than a month. (2). 1-4 months (3). 5-9 months

(4). 10-12months (5). 1-2 years. (6). 2.5- 5. (7). More than 5 years.

33. What care did the deceased get from the home-based care team? [ ]

34. How often was the visitation from the team? (Specify).................. [ ]

E. CHOICE OF PLACE OF DEATH AND DYING INTHE HEALTH FACILITY.

35. Did the deceased make any choice regarding where he/she would like to die from? 1. YES. [ ] 2. NO. [ ] [ ]

36. If yes in Q 35, what was the choice? (1). Home death (2). Hospital death (3). Other (specify)......... [ ]

37. Where choice of place of death was made by deceased, why do you think such a choice was made? [ ]

(1). He/ she liked the conditions at the hospital.

(2). Had better care at hospital.

(3). Because the illness was chronic.

(4). Because there was no treatment at the hospital

(5). N/ A.

(6) Others (specify)

38. Was the deceased's place of choice of death fulfilled? [ ]

(1). Yes. [ ] (2).No. [ ] (3.) N/A

39. If no in Q 38, why was it not fulfilled? (Specify)...................... [ ]

E. KNOWLEDGE OF DISEASE AND DYING IN THE HEALTH FACILIY.

40. Did the deceased know the actual disease he/ she was suffering from? [ ]

1. YES. [ ] 2. NO. [ ] 3. No knowledge

41. If he or she knew, what did he or she say it was? (Specify)................... [ ]

42. If he or she knew the type of illness, what was the source of the knowledge? [ ]

(1). Health staff. (2). Relatives (3) Friends. (4). Traditional beliefs

(5). Witch Doctor/divination. (6). Past experience with similar disease.

(7). Had seen a similar disease with someone else before.

43. Did he/ she know/ say how dangerous the disease was?). [ ]

1. YES [ ] 2. NO. [ ]

44. What was dangerous about it or the dangerous sign of the disease? [ ]

(Specify)..

45. Did you or the deceased know the that he/ she would die with this illness? [ ]

1.Yes. [ ] 2. No [ ]

G. DIAGNOSIS AND ADVICE, AND DYING IN THE HEALTH FACILITY

46. Who examined and prescribed treatment for the patient when you went to the hospital?...................... [ ]

(1) Nurse (2) Clinical officer (3) Doctor (4) Consultant

47. What was the diagnosis and advice given to the patient on admission? [ ]

48. What was the advice given? [ ]

(1) Given treatment (2) Given an appointment (3) Given a prescription to buy medicine.(4) Was told that he/she had no problem. (5) Others ....

49. Was there any improvement in the condition before the deceased died? [ ]

(1) Yes (2) No

50. At what stage did the deceased die? [ ]

(1) While still being attended to when he just arrive at the hospital.

(2) Shortly after diagnosis and treatment in the hospital

(3) More than a day after diagnosis and treatment in the hospital.

(4) After diagnosis and taking hospital medicine more than a week.

(5) When the medication finished.

(6) Others (specify).........

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JICA

Chazanga Clinic
Ngombe Clinic
Chaisfon Clinic
Kaunda Square Clinic
Matero Reference Clinic
Mandevu Clinic
Chipata Clinic
George Clinic
Matero Main Clinic
Chainama Clinic
Chainda Clinic
Mutendere Clinic
Kalingalinga Clinic
Railway Clinic
Clinic
Kanyama Clinic
Chawama Clinic
Bauleni Clinic
Chilenje Clinic
State Lodge
Makeni Clinic

Lusaka District Primary Health Care Project