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Conceptualising quality in health care as perceived and experienced by households : a case study of privatising Zambia Consolidated Copper Mines, Luanshya Division.

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ABSTRACT

Donabedian's framework, based on the structure, processes and outcomes is widely used to assess quality in health care studies. This study argued the relevance of Donabedian's framework in exploring changes of quality in health care as perceived and experienced by households.

The study was conducted in three mining townships in Luanshya town. Six focus group discussions composed of 8 – 12 respondents were conducted within the households. In addition, interviews were conducted with the District Director of Health in Luanshya town and the Manager Human Resources at Luanshya Copper Mines Plc. In addition, documents such as newspapers and reports from the Zambia Privatisation Agency were analysed.

The study revealed that quality in health care had declined based on thirteen areas of concern. In response, households have adopted coping strategies in their access to health care. Households who incur high costs in their access to health care have reduced access to formal care while those that incur low costs have maintained their access. These findings presented a major limitation in Donabedian's framework. Whereas the framework focuses only on the micro process of users seeking health,

it omits important factors described in the blueprint, which affect access to health care.

Based on the findings from households and limitations of Donabedian's framework a blueprint to conceptualise quality in health care within Zambia was proposed. The blueprint recognises the macro context, which considers the economic and social contexts that affect access to health care and, therefore, influence household's perceptions of quality.

Within the macro context, the economic context, which is privatisation, affected household incomes and the cost of travel. Additionally, the social context reflected by services provided by other health systems, has also affected household utilisation of mine facilities. Both factors have helped form households' negative perceptions of quality in health care.

DECLARATION

I declare that this research report is my own unaided work. It is submitted for the degree of Masters in Development Studies in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other University.

……

Angela Kasambo Tembo

……..day of ……, 2009

DEDICATION

For mum and dad, Mr. Wilfred Tembo and Mrs. Grace Tembo.

With sincere thanks for your love and support during the writing of this research report.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
AFRODAD	African Forum and Network on Debt and Development
CODELCO	National Copper Corporation of Chile
DA's	Development Agreements
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Syndrome
ICU	Intensive Care Unit
LCM	Luanshya Copper Mines
MDG'S	Millennium Development Goals
MOH	Ministry of Health
PHO	Provincial Health Office
RAMCOZ	Roan Antelope Mining Corporation
SOE's	State Owned Enterprises
UN	United Nations
WHO	World Health Organisation
ZCCM	Zambia Consolidated Copper Mines
ZCCM –IH	Zambia Consolidated Copper Mines Investments Holdings Plc
ZDA	Zambia Development Agency
ZPA	Zambia Privatisation Agency
ZESCO	Zambia Electricity Supply Corporation
ZMK	Zambian Kwacha

CHAPTER 1: OVERVIEW

1.1 INTRODUCTION

This chapter provides an overview to this research report. The research investigated households' perceived and experienced changes into the quality of health care after privatisation of Zambia Consolidated Copper Mines (ZCCM), Luanshya Division. The report critically discusses the relevance of defining quality in health care from the structure-process-outcome as proposed by the conceptual framework developed by Avedis Donabedian in 1988 (Donabedian 2005).

The report argues that quality in health care is not limited to the micro process, which is based on the interaction between users and health service providers. Instead the macro context consisting of the economic and social contexts, also affects how quality in health care is perceived. Chapter 6 presents the argument of this research report.

Five sections comprise this chapter: Firstly, it provides the background to the study; secondly, it presents the research questions; thirdly, it gives the research aims; fourthly, it explains the rationale of the study and lastly it provides an outline of the next seven chapters.

1.2 BACKGROUND TO THE STUDY

From the 1970's to 1990's, there was a growing global trend away from state ownership to private control (Craig 2001; Jauch 2002). The two main reasons for the trend are: firstly, state owned enterprises (SOE's) were badly managed which resulted in these institution to be inefficient and unable to sustain themselves. As a result they were highly subsidised by the government. Secondly, the neo-liberalism model for economic development gained prominence as the best regulator and mechanism for economic growth (Jauch 2002). It is in favour of these reasons

coupled with increased cost of production and declining output that ZCCM was privatised in 1996 (Craig 2001; Kangwa S 2001).

ZCCM was one of the largest copper producers in the world with operations in seven towns on the Copperbelt province in Zambia. In the early 1990's it was the fifth largest copper producer in the world, accounting for 4 per cent of refined copper (Craig 2001). However, the Company faced serious financial and long-term development problems, which rendered its operations unsustainable.

The Company did not have enough capital to manage its operations despite recording pre-tax profits every year since 1984 (Simutayi 2008). As such, there was inadequate re-capitalisation in exploration and machinery. This resulted in ZCCM being one of the highest cost producers of copper (Craig 2001; Ferguson 1999; Fraser and Lungu 2006). In 1993 for example, the Company's cost of production was about US $ 0.83 per pound of copper compared to the National Copper Corporation of Chile (CODELCO) US $0.73 per pound of copper (Kangwa S 2001). The high cost of production also had implications on copper production.

Copper production declined throughout the 1990's. Mupimpila and van der Grijp (1999) attribute this to technical difficulties of operating at greater mining depth coupled with falling copper grades. Copper production by ZCCM declined from as high as seven hundred and fifty thousand (750,000) tonnes in 1973 to two hundred and seventy five thousand (275,000) tonnes in 1995 (Simutayi 2008). It was against this background that the ZCCM was privatised with Luanshya mine being sold in 1997.

ZCCM did not just look after its employees, the Company provided services to whole communities. The Company provided basic services such as health, education and water. In addition, ZCCM managed the environment in the mine townships by maintaining roads and refuse collection. The Company also encouraged the growth of economic and social activities dependent on miners' incomes, such as shops. Youth development schemes helped youths in the

townships identify the skills they could pursue and formalise as careers while women's clubs concentrated on home-craft activities (Fraser and Lungu 2006). At privatisation, services provided to the mining communities were withdrawn which led to public outcry.

Privatisation of Luanshya Division of ZCCM was marred by negative publicity especially concerns of unemployment and the withdrawal of social services, which were previously provided by the Company (Fraser and Lungu 2006; Kangwa J 2001; Posthumus 2000). Studies addressing the consequences of privatising ZCCM on social welfare on the Copperbelt province seem to point to a negative change in quality of social services offered (African Forum and Network on Debt and Development (AFRODAD) 2007; Kangwa J 2001; Kangwa S 2001; Fraser and Lungu 2006; Simutayi 2008). A social scan conducted by Kangwa S (2001) in mining towns, showed that privatisation of ZCCM had negative impacts on social welfare. An average of 80 per cent of the sample suggested that social services have drastically declined. High on the list of complaints was the decline of quality in health care.

There is a perceived decline of quality in health care since privatisation of ZCCM. In Luanshya, the apparent decline is seemingly because there has been a reduction in the number of health facilities (Fraser and Lungu 2006). ZCCM operated two hospitals and five health centres in Luanshya. One of the hospitals and three of the health centres have since been handed over to government. However, quality in health care is not only indicated by the adequacy of facilities. The conceptual framework for assessing quality in health care developed by Avedis Donabedian in 1988 is a major point of reference for assessing quality in health care (Bowling 2002).

Donabedian is important to this study as he pioneered the first analytical approach for structure, process and outcome in his quest for quality of health care delivery (Perides 2001). Donabedian's ground breaking work has clarified approaches for

measuring quality through the classification of health care into three main categories: structure-process-outcome (Paranilam and Silverstein 2007).

1. *Structure*- Refers to the way health activities are organised. This involves assessing the adequacy of equipment, buildings, staff and beds.
2. *Process* – Refers to health activities. This includes adherence to good medical care through technical competence of staff, patient accessibility and interaction between personnel and patients.
3. *Outcome*- Refers to impact of activities. This includes measuring mortality and patient satisfaction, which reveals the impact of health care on individuals.

In order to explore the changes of quality in health care since privatisation, an explorative study was undertaken in mine facilities in Luanshya by adopting Donabedian's conceptual framework. The changes in quality were 'as perceived and experienced' by households before and after privatisation of ZCCM. Due to great importance placed on patient experiences and satisfaction in defining quality in health care, households are main units of analysis for this study.

1.3 RESEARCH QUESTIONS

The main research question was:

- What are the households' perceptions and experiences towards the changes of the quality in health care since the privatisation of ZCCM?

The sub questions were:

- What ways have households adopted in accessing health care since the privatisation of ZCCM?
- Which dimensions can be useful in proposing a blueprint framework for defining quality in health care at mine facilities?

1.4 AIM OF THE STUDY

The study explored the changes of quality in health care 'as perceived and experienced' by households. In so doing, it aimed to:

- Explore the changes of quality in health care at mine facilities 'as perceived and experienced' by households' pre and post privatisation of ZCCM.
- Explore household responses in accessing health care services after privatisation.
- Propose a blueprint framework for conceptualising quality in health care in Zambia.

1.5 RESEARCH RATIONALE

The rationales for the study were as follows:

- Research undertaken on quality in health care in Zambia has not used privatisation as an intervening factor. Notable studies undertaken on quality in health care in Zambia (Hanson, McPake, Nakamba and Archard 2005; Hjortsberg n.d; Hjortsberg and Mwikisa 2002; Masiye, Chitah, Chanda and Simeo 2008) have had different objectives. The study by Hanson et al. (2005) was undertaken in order to assess factors influencing the demand for hospital care in Zambia, in particular the role of quality (perceived) and trade-offs between price and quality. Hjortsberg (n.d) attempted to explain health care expenditure among households from different socio-economic groups. Hjortsberg and Mwikisa's (2002) research aimed at exploring equity in terms of the cost of accessing health care because of the introduction of user fees in Zambia. Research by Masiye et al. (2008) addressed the effects of removing user fees on health utilisation and quality of care. These studies have not addressed the 'perceptions and experiences towards the changes of the quality in health care since the privatisation of ZCCM; therefore, this study was embarked

on'. This study explained the perceived changes of quality in health care with privatisation as an intervening factor.

- Although ZCCM played an important role in the provision of health, no major studies have been undertaken to explore the consequences of privatisation on health care in particular. Research undertaken has tended to bundle the social services instead (AFRODAD 2007; Fraser and Lungu 2006; Kangwa J 2001; Simutayi 2008). This study unpacked the social services by focusing on health care alone.

- Prior to the privatisation of ZCCM, the Company's health facilities were of high quality (Fraser and Lungu 2006; Nwuke and Bekele 1995) because they were well funded in Zambia (ZCCM accounted for approximately 24 per cent of the national health expenditure in 1990). The health facilities were free to employees and their families including registered dependents (Kangwa S 2001). In Luanshya alone, ZCCM operated two hospitals and five health centres and after privatisation, one hospital and two health centres were retained by the company. This research unbundled the services by focusing on changes in the quality of health care before and after privatisation as perceived and experienced by households. It will contribute to the current literature on the consequences of privatisation on social services as well as lay a foundation for future research into changes in the quality of health care in former ZCCM facilities.

- Research that has been conducted on the quality of social services has mainly used quantitative research methods (AFRODAD 2007; Fraser and Lungu 2006; Kangwa J 2001; Simutayi 2008). The results of this research indicate peoples' negative sentiments with the lowered levels of quality. A quantitative study conducted by Kangwa S (2001) in five former mining towns shows that privatisation of ZCCM has had negative impacts on social welfare. An average of 80 per cent of the sample suggested that social services have drastically declined. In Luanshya alone, 91per cent of the people interviewed viewed the

privatisation of ZCCM as having brought about no tangible benefits. Among the social services addressed include health care, education subsidies on school fees, electricity, water and telephone bills to mention a few. This research was qualitative, as it focused on household's perceptions and experiences on quality in health care since the privatisation of ZCCM. According to Sofaer (2002) qualitative methods help provide rich descriptions of phenomena. They enhance understanding of the context of events as well as the events themselves. This study provided a qualitative perspective to the perceived and experienced changes of quality in health care.

1.6 CHAPTERS OUTLINE

This research report consists of seven chapters including this chapter (Chapter One) that provides the motivation for the research, the problem statement, and the overall objectives of this study. Chapter Two is the literature review and theoretical framework. Chapter Three describes the methods, sample, processes, ethical considerations, data analysis, and the validity and reliability of the study as well as challenges faced during data collection. Chapter Four presents the findings of the study. Chapter Five discusses the findings of the study. Chapter six proposes a blueprint for conceptualising quality in health care. Chapter Seven presents the conclusion, implications and limitations of the study, and includes recommendations for future research topics.

1.7 SUMMARY

This chapter set an overview to the study. The research aims were to explore the perceived changes of quality in health care at mine facilities since the privatisation of ZCCM. Apart from exploring the perceived changes, the research also intended to explore household responses in accessing health care after privatisation. Additionally, the study aimed to propose a blueprint framework for conceptualising quality in health care in Zambia. In so doing, the research argues that apart from

health factors; economic and social contexts are also important in determining quality in health care.

Four rationales support this research. Firstly, the study explained the perceived changes of quality in health care with privatisation as an intervening factor. Secondly, it unpacked social problems arising from privatisation of ZCCM by focusing on health care alone. Thirdly, it focused on quality in health care. Fourthly, it provided a qualitative perspective to the perceived changes of quality in health care.

The following chapter (Chapter Two) will provide a critical analysis of Donabedian's framework in defining quality in health care as well as provide an overview of various dimensions used to address quality in the developing world.

CHAPTER 2: LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 INTRODUCTION

Four sections comprise this chapter. Firstly, it discusses definitions of health care and factors that affect access to health care. A discussion on coping strategies with examples drawn from developing countries such as Zambia is also provided; Secondly, quality in health care is defined by critically analysing frameworks developed and dimensions commonly used in literature with examples drawn from developing countries such as Zambia; Thirdly, limitations in the definition of quality in health care are discussed; Fourthly, an overview of the functions, responsibilities of the Ministry of Health (MOH) and health care providers especially the mines is given. Challenges in health delivery and their implications thereof on quality are also discussed.

2.2 DEFINING HEALTH CARE

Perhaps a good starting point is to define health care. The World Health Organisation (2004) defines health care as "services provided to individuals or communities by health service providers for the purpose of promoting, maintaining, monitoring or restoring health". Closely related to this is the definition used by the British Department of Health. The British definition of health care consists of "services provided for, or in connection with, the prevention, diagnosis or treatment of illness, and the promotion and protection of public health" (British Department of Health 2004). In Zambia, health care includes preventive, curative and rehabilitative measures of care (Ministry of Health 2005). Most recently, health care particularly in developing countries has been linked to poverty.

According to O'Donnell (2007), poor people suffer from poor health and die younger as they have a higher than average child maternal mortality, higher levels of disease and limited access to health care and social protection. The World Bank

(2000) acknowledged the link between health and poverty through the 2000/1 World Development Report. The United Nations (UN) further recognizes the relationship between health and poverty.

Three of the UN's eight Millennium Development Goals (MDG's) are aimed at addressing some specific health issues by 2015. These are; reducing child mortality; improving maternal health; combating spread of HIV/AIDS, malaria and other diseases. However, there is little progress made in achieving the health MDG's with one of the main reasons being deficiencies in access to health care (United Nations Economic Commission for Africa 2008).

Access to health care remains one of the biggest obstacles in the health of the poor. According to O'Donnell (2007), access to health consists of four dimensions, which are availability, accessibility, affordability, and acceptability. In the developing world, millions suffer and die from treatable diseases due to under-utilisation of health facilities (O'Donnell 2007). Factors responsible for under-utilisation can be addressed from the supply and demand side.

According to O'Donnell (2007) factors from the supply side, which impede the effective delivery of effective health care include insufficient resources, inappropriate allocation, and inadequate quality. However, access problems cannot be solved by tackling these deficiencies as it is found that even where health care services are available there are reported cases of low demand (O'Donnell 2007).

O'Donnell (2007) identifies two sets of factors that affect the levels of demand: constraints and preferences which are discussed in the two sections below.

Constraints in the demand for health care

Constraints are determined by the income of the household, the charges made for health care, and costs incurred to reach health services (Diop, Seshaman and Mulenga 1998; Gwatkin 2004; Hjortsberg 2003).

Household income is a major constraint in the demand for health care. The monetary costs of health make income an important determinant in the utilization of care. As such, when poor people become ill, the entire household can be caught up in a downward spiral of lost income especially when the cost of health care is high (Gwatkin 2004; O'Donnell 2007).

High cost of health care is also another determinant of demand for health (Baltussen and Ye 2006). This is even worse for those who make out-of-pocket payments due to lack of insurance. Because the poor are more price sensitive than the better off, introduction of user fees or high charges often excludes them from essential services (O'Donnell 2007). However, this is not always the case as there are recorded cases where people continue using facilities despite high costs if quality is high.

Abolition of user fees in Uganda was associated with an increase in utilization by the poor, but this was not true in South Africa, where fees for maternal and child health services where removed. This is so because the abolition of user fees in Uganda was linked to an increase in quality, where as the abolition of user fees in South Africa led to poor health services. Evidence also shows that people continue to use health facilities with high costs as long as there is a combined improvement in quality of health and reduced travel distances (O'Donnell 2007).

If high user charges are combined with improved quality and reduced travel time, utilization of health can increase, even for the poor. According to O'Donnell (2007), when travel distances were reduced and quality improved in Bangladesh, it led to an increase in the levels of utilisation. A reduction of travel distances reduces the costs incurred to reach health facilities and, therefore, increases utilisation.

Travel costs especially in rural areas can be substantial. The distances to health care facilities and the poor condition of roads mean that time, effort and cost required to reach health facilities is high. Locating health facilities as close to the people as possible increases utilisation. For example, in Ghana, halving the distance to public

health facilities was estimated to almost double the utilization rate (O'Donnell 2007).

Preferences in the demand for health care

Preferences on the other hand are influenced by culture, knowledge of the potential benefits of health care, and the quality of the services available. Low demand for health care is often deep-rooted in attitudes that reflect culture and social norms (Betancourt, Green, Carillo and Firempong 2003).

Adherence to norms is largely influenced by the socioeconomic environment and gender attitudes. Research by Diop et al. (1998) found that households headed by individuals with secondary school or higher level of education are likely to seek health care. Gender attitudes are also important.

In Indonesia, utilization of prenatal care increases when a woman exercises control over household finances. While in Africa, women make more use of public health care than men do in the high-income group, but the gender preference is the opposite in the low-income groups (O'Donnell 2007). Recognition of illness and the potential benefits of treatment, nonetheless, are still very low among the poor.

When a large proportion of the population has poor health, it becomes like a norm, and as a result the illness is not easily recognized. According to O'Donnell (2007), differences in knowledge of illnesses are reflected in variations of health care utilization. In rural Tanzania, better-off households are more likely to recognize signs of illness in a child below five years and seek care and treatment than the poorer. However, quality is a major problem in many, but not all, developing countries.

According to Hjortsberg and Mwikisa (2002), demand for health care diminishes in response to the poor quality. O'Donnell (2007) cites an example in Ghana where a decline in quality of public health care was associated with a 40 per cent fall in

utilization between 1979 and 1983. Low quality of health care can result in patients forgoing care.

According to O'Donnell (2007), people bypass facilities nearest to them and seek care at a higher-level public facility or in the private sector. Ding, Chen, Feng and Li (2008) also identify that households adopt different strategies in response to changes in quality. A study conducted by Ding at al. (2008) in China, identified that coping strategies are most commonly used to relieve the impact once the shock has occurred. Apart from coping strategies, other strategies include:

- Prevention strategies: Reduce the likelihood that the household will experience the shock.
- Mitigating strategies: Decrease the potential impact of a future shock, including portfolio diversification, insurance, hedging/risk exchange

However, coping strategies are the most common amongst the developing world and are important in explaining household responses to adverse shocks. With coping strategies, households adjust consumption in two ways (Ding et al 2008):

- Firstly, maintaining the same consumption level by: selling food grains; selling livestock and poultry; private borrowing; borrowing from financial institutions; postponing repayment.
- Secondly, reducing consumption level by reducing food/other necessities; migration; delaying seeking for health services; shortening inpatient stay; seeking for cheaper services; not seeking medical services; delaying the payment of medical expense.

A study by Sauerborn, Adams and Hein (1996) in Burkina Faso also identified similar coping strategies. The research revealed that households make use of any available cash or savings on health expenditure; sale assets especially livestock or grains; get loans from friends and family; engage in a wide variety of income

generating activities; seek for cheaper sources from traditional healers or get assistance from extended family or expatriate health workers.

The studies also show that the most vulnerable are women, especially widows, divorcees, unmarried women with children and the elderly (Russell 1996; Sauerborn et al. 1996). The effectiveness of coping strategies is also dependent on household composition and economic status.

Coping strategies in large households with many productive members are effective. According to Sauerborn *et al*. (1996), this is because they can compensate for work lost to illness. In addition, wealthy households have a greater armoury of coping strategies than poorer households do.

Having established what constitutes health care and its utilization, quality in health care will now be discussed in the following section.

2.3 DEFINING QUALITY IN HEALTH CARE

Quality in health care has been commonly used to mean excellence, zero-defects and meeting patient expectations. Popular scholarly definitions include meeting patients' desired needs and outcomes (Donabedian 1990; Kelley and Hurst 2006), while others introduce dimensions of access and effectiveness (Campbell, Roland and Buetow 2000). Donabedian (1990) defines quality as "the expected or realized ability of the care to achieve the greatest improvement in health that the current science and technology of healthcare can achieve; acceptability to patients (including their families); and acceptability to the community (or the society at large)". Evidently, quality is a complex multi-dimensional aspect of health and according to Campbell et al. (2000) indicators of quality vary with each study.

A study conducted in the former Zaire (now Congo) found that women valued human qualities such as respect, courtesy, patience, attentiveness, friendliness and straight-forwardness (Haddad and Fournier 1995). A similar study in Guinea by

Haddad, Fournier, Machouf and Yatara (1998b) led to the classification of "lay people's" perceptions of the quality of primary health care services using five dimensions with two of them referring to the personnel, two to the facilities and, one to health care outcomes. Though different, the dimensions are classified in the often-used structure, process and outcome framework.

Analysis of frameworks developed to define quality in health care

Perhaps a starting point in defining quality in health care is to address frameworks that have been developed to this effect. A good basis is the World Health Organisation's framework, which is based on understanding national health systems. The framework rests on three goals: optimal health for all, responsiveness and fairness in financing (World Health Organisation 2000a). According to McQuestion (2006), each goal addresses key dimensions of quality as shown in Table 2.1.

Under optimal health; health outcomes, technical competence, appropriateness, effectiveness, safety and accessibility are addressed. Within the responsiveness goal is the patient relationship with health care providers. Under fair financing, the main issue of quality is affordability. However, Donabedian (2005) argues that the assessment of quality should apply to health in its totality.

Possibly the most famous framework is Donabedian's which identifies links between the structure, process and outcome of the health care system as shown in Figure 2.1. Structure refers to the organisational framework for the activities; process refers to the activities themselves; and outcome refers to the impact (effectiveness) of the activities of interest (e.g. health services and interventions) in relation to individuals (e.g. patients) and communities (Benbassat and Taragin 1998).

Table 2.1 World Health Organisation Framework for Quality

Goal	Quality issues
Optimal Health	Health outcomes/improvement Technical quality/proficiency/competence Appropriateness Effectiveness Safety Prevention/early detection Access/availability/continuity
Responsiveness	Consumer participation/choice Patient/care provider experience Acceptability Respect and caring Availability of information Timeliness
Fair Financing	Affordability

Source: McQuestion 2006

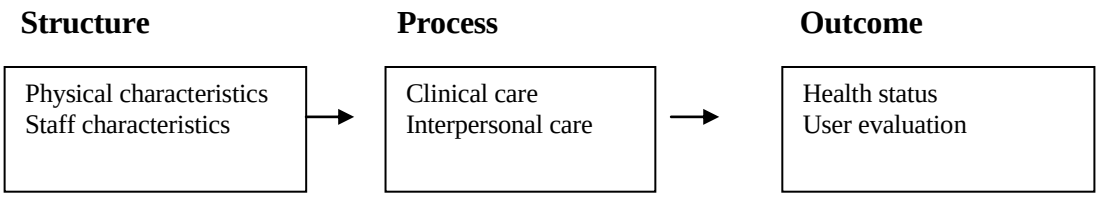


Figure 2.1: A conceptual framework for quality in health care

Source: Campbell et al. (2000)

Research reveals that structure refers to administrative and process related issues in the provision of health care. Structure indicators of a health organisation address issues such as buildings, equipments, staff and beds that are all important in the provision of health care (Bowling 2002). Yet, process indicators are widely used.

Process indicators refer to how health services are organized, delivered and used. These indicators include accessibility (e.g. proximity to public transport, waiting lists), the way in which personnel and activities interact, as well as interaction between personnel and patients (Bowling 2002).

Outcome indicators of health signify the effects of health services on patients' health as well as patients' evaluations of their health care. Outcome links to the effectiveness of care received in relation to the intended goal. Broad measures of outcome include reduced symptoms and patients/ carer's satisfaction with treatment/outcome (Bowling 2002).

Donabedian's framework has often been used for research and has yielded various dimensions within the structure, process and outcomes of health care. As such, the study in this report will explore changes in quality of health care and thereby test the relevance of Donabedian's framework.

In recent years, quality in health care has been expanded to include specific aims for improvement. Key is the Institute of Medicine's (2001) landmark report, which broadens the concept to include how process changes can improve care. It focuses on six aims: patient safety, effectiveness, patient centeredness, timeliness, efficiency, and equity (see Box 2.1).

However, as stated earlier, there is no generic definition of quality due to its multi-dimensional nature. As such, studies into perceived quality in health care also identify different dimensions. Dimensions are, therefore, dependent on respondent's expectations from the health care system. Based on this analysis, it is, therefore, important to explore common dimensions of quality presented in literature.

Box 2.1 The Institute of Medicine's Six Elements of Quality

1. *Patient safety*. Are the risks of injury minimal for patients in the health system?
2. *Effectiveness.* Is the care provided scientifically sound and neither underused nor overused?
3. *Patient centeredness*. Is patient care being provided in a way that is respectful and responsive to a patient's preferences, needs, and values? Are patient values guiding clinical decisions?
4. *Timeliness.* Are delays and waiting times minimized?
5. *Efficiency.* Is waste of equipment, supplies, ideas, and energy minimized?
6. *Equity.* Is care consistent across gender, ethnic, geographic, and socioeconomic lines?

Source: Peabody, Taguiwalo, Robalino and Frenk 2004

Common dimensions of quality in health care

Dimensions of quality in care are often identified within the structure, process and outcome of health (Haddad et al. 1998b). In line with this, research by Sixma, Kerssens, van Campen and Peters (1998), led to the identification of four dimensions. These dimensions are: - medical-technical competence of the caregivers, physical-technical conditions of the care organisation, degree of identity-orientation in the attitudes and actions of the caregivers, and socio-cultural atmosphere of the care organisation. The study was conducted with patients from England, France, Norway and Sweden and yet it yielded dimensions commonly used in the developing world.

Studies in the developing world reveal that patients are more concerned with the structure and process of care. Research on urban consumer preferences in Fiji revealed that patients demand for art of care, availability of drugs and personnel, good physical environment, technical quality, accessibility, and in-patient food

(Haddad et al. 1998b). A similar research on quality of care in Tanzania resulted in categorization of six perceived quality in health care dimensions. These included the conduct of health staff, technical care, out-come of care, organization of the health care, drugs availability, and staffing levels (Haddad et al. 1998b).

Research in Guinea by Haddad et al. (1998b) led to the classification of lay people's perceptions of the quality of primary health care services using five dimensions. The five dimensions identified were technical competence, attitudes and conduct of staff, availability and adequacy of resources and services, accessibility and effectiveness as shown in Table 2.2. Adequacy of resources and services refers to the structure. Technical competence and attitudes/ conduct of staff and accessibility refer to the process while effectiveness refers to outcomes.

These dimensions of quality are discussed with examples in the developing world. Technical competence addresses skills, capability and actual performance of health care providers in the diagnostic, decision and treatment process (Brown et al 2005, Haddad et al. 1998b). Users of health care recognize the importance of a good diagnosis, adequate treatment, as well as the need to receive sufficient information on the health problem and the treatments to follow (Haddad et al.1998b).

Research in Zambia into patient perceptions of health care by Hanson et al. (2005) also identified correct diagnosis, treatment and explanation of medical problem as important dimensions of quality. According to Branco et al. (2005), a lack of technical competence can range from minor deviations from standard procedures to major errors that decrease effectiveness or jeopardize patient safety. However, the role of staff attitudes is equally important.

Table 2.2: Classification of lay people's perceptions of the quality of primary health care services

No	Aspect	Sub Aspects	Criteria
1	Technical competence	Diagnostic process	Questioning patient, good clinical examination, good diagnosis
		Decision process	Appropriate prescription, appropriate referrals
		Treatment process	Drugs dispensed rapidly, good advise
2	Attitudes, conduct	Interpersonal competence	Reception, support, respect, kindness and patient regarded as equal
		Interest taken in patient	Access to doctor upon arrival, willingness to serve
		Integrity	Honesty of personnel
3	Availability and adequacy of resources and services	Human Resources	Presence of doctors and/ or good doctors
		Drugs and treatment	Availability of drugs and/or good drugs
		Equipment	Availability of diagnostic equipment (devices)
		Rooms, buildings	Condition, cleanliness, availability of hospital beds, running water
4	Accessibility	Geographic accessibility	Distance to facility
		Financial accessibility	Drugs and services free, delivery of services not conditional upon prior payment
		Organisational accessibility	Waiting time, access to doctor upon arrival
5	Effectiveness	Effectiveness of care	Recovery, rapid cure

Source: Haddad et al. (1998b)

As much as users want proper treatment, they also want a proper reception (Haddad et. al. 1998b). Proper reception is often achieved through staff attitudes towards the users. Good staff attitude are reflected in good interpersonal relations, which help to

establish trust and credibility through demonstrations of respect, confidentiality, courtesy, responsiveness, and empathy (Brown et al. 2005).

Based on research conducted in Zambia, users valued courteousness of doctors and nurses as important dimensions of quality in health care (Hjortsberg and Mwikisa 2002; Masiye et al 2008; Hanson et al. 2005). Lack of good interpersonal relations may affect the technical competence of health care providers and force patients to seek health care elsewhere.

Further, inadequate interpersonal relations can reduce the effectiveness of a technically competent health service. Patients who are poorly treated may be less likely to heed the health care provider's recommendations, or may avoid seeking care (Brown et al. 2005). Quality of health care is also dependent on the availability and adequacy of resources.

Research by Haddad et al. (1998b) classified resources into staff, drugs, equipment and amenities. The presence and availability of these resources is important in the care process as they attract and retain clients, ensuring continuity of coverage. In addition to resources, accessibility is also very important.

Both Brown et al. (2005) and Haddad et al. (1998b) acknowledge accessibility as a dimension of quality in health care. It has also been identified in research conducted in Zambia (Hanson et al. 2005; Hjortsberg and Mwikisa 2002; Masiye et al 2008). Access to healthcare is multi-dimensional as it addresses geographic, financial, social, cultural, organisational and linguistic barriers. Accessibility to health services also determines the levels of utilization.

Research by Haddad, Fournier and Potvin (1998a) suggested that proximity to health resources is an important criterion for judging quality of health. Geographic access is especially significant in developing countries due to inadequate transportation and long distances to health facilities (Brown et al. 2005). In Zambia, people living in rural areas, struggle to access timely, and quality medical

care due to their geographic location. In cases where health facilities are located nearby, finances are normally a limitation.

Financial access refers to the affordability of products and services for users (Haddad et al. 1998b). This aspect was discussed in the previous section under household incomes. Apart from lack of financial accessibility, the poor are affected by social or cultural access.

Social and cultural access relates to service acceptability within the context of the users cultural values, beliefs, and attitudes (O'Donnell 2007). Social and cultural background of users influences their health-seeking behaviours and attitudes toward care providers. Cultural variations also influence perception of illness and disease and their causes. In such settings, health providers have to be culturally sensitive, responsive, as well as exercise humility. In order to make the user feel at ease, the use of local languages or dialects, which the user is fluent, is encouraged (Betancourt et al. 2003, Brown et al. 2005).

Organisational access on the other hand refers to the extent to which services are conveniently organized for prospective clients. This encompasses issues such as clinical hours and appointment systems, waiting times, and the mode of service delivery. Organizational access is particularly important as it determines the effectiveness of treatment (Betancourt et al. 2003; Brown et al. 2005).

Effectiveness is an important dimension of quality. Effectiveness of treatment is measured by recovery. Any procedure or treatment, when correctly applied, should lead to the desired results. However, this treatment should be given in the most technologically appropriate manner for the setting in which it is delivered (Brown et al. 2005).

As a dimension of quality, safety means minimizing the risks of injury, infection, harmful side effects, or other dangers related to service delivery (Peabody et al. 2004). Medical errors result in thousands of needless deaths per year and yet safety

as a dimension of quality is rarely identified as a common dimension especially among users.

Safety should not only be important to health providers but also to users. For example, safety is an important dimension of quality for blood transfusions, especially since the advent of AIDS (Reerink and Saverborn 1996). Health workers who handle blood and needles must be protected by safety procedures. Patients must also be protected from infection. Safety is also directly related to interpersonal relationships.

Medical errors also involve issues surrounding communication. Examples where poor communications leads to compromised safety are with the prescription of medication. Health providers often give wrong medication or dose and they fail to adequately assess contra-indications including allergies and serious drug interactions (Reerink and Saverborn 1996).

To present a balanced view, in-depth analysis is required to explore limitations in defining quality in health care. The next section will unveil the two points of debate.

2.4 LIMITATIONS IN DEFINING QUALITY IN HEALTH CARE

According to Veney, Magnani and Gorbach (1993), research and writing on quality in health care has resulted in two principle points of controversy. The first involves the unit of analysis of quality of services. The question is whether quality is appropriately measured by examining the entire complex of service inputs, service process and service outcomes, or by examining only the service delivery process. A second point of controversy surrounds the issue of who defines quality: is it best defined by clients, providers, managers, policy makers, researchers, or by some or all of these?

a. Units of analysis

Most literature on the appropriateness of units of analysis is based on research into family planning services (Bruce 1990; Veney et al. 1993). Arguments concerning the appropriateness of the units of analysis in quality of family planning services criticize Donabedian's systems framework. Central to this criticism is that Donabedian gives the same weight to structure, process and outcome issues of quality.

This has led to family planning researchers separating process factors from structure, and outcome factors. Pioneered by Bruce (1990), the focus on quality of family planning services has been reduced to the process (Veney et al. 1993). Bruce (1990) has defined quality of services into six specific elements of the process of service delivery.

These include choice of methods, information given to clients, technical competence, inter-personal relations, follow-up/continuity mechanisms, and appropriate constellation of services. The Bruce framework has become the defining conceptualisation in the discussion of quality of services in family planning services. With regard to general health care though, quality of care is popularly addressed by structure, process and outcomes.

An adequate measure of quality requires examining the entire process of service inputs, process and outcomes (Donabedian 2005). However, the relationship between the structure, process and outcomes is not easily cut out, as the next paragraphs will discuss.

According to Peabody et al. (2004), structural measures are the easiest to obtain and most commonly used in studies of quality in developing countries. Structures rest on the assumption that given the proper settings and equipment, good medical care

will follow (Donabedian 2005). Measuring structure offers the advantage of dealing with fairly concrete and accessible information (Peabody et al. 2004).

The main limitation though is that the relationship between structure and process or structure and outcome, is often not well established. Material measures of structures such as shortages in medical staff, medications and facilities are not causally related to better health outcomes (Peabody et al. 2004).

Although better technology or a more pleasant environment may be conducive to better-quality care, evidence indicates only a weak link between such structural elements and better health outcomes (Peabody et al. 2004). Nevertheless, there are notable exceptions to this.

Physical improvements can either increase access to primary care in very poor settings or increase the volume of a clinical procedure, such as cataract surgery, that is specifically linked to better health outcomes (Peabody et al. 2004). At best, however, structure is a dull estimate of process or outcomes as its upgrading rarely improves the health of a population.

Processes on the other hand can be used to measure whether proper medical care has been applied with every visit to the health facilities. Such information is obtained through clinical records, direct and indirect observation (Donabedian 2005). Peabody et al. (2004) identify additional measurement methods, which include administrative data, standardized patients and clinical vignettes.

Evidence-based clinical studies have steadily revealed that process measures lead to better health outcomes (Bruce 1990; Peabody et al. 2004). The advantage with process measures is that they are a direct measure of quality and are easy to interpret. For instance, Mant (2001) shows that the use of aspirin in a myocardial infarction (heart attack) is a direct measure of quality. This is unlike measuring hospital mortality from heart attacks, which is indirect. However, limitations in process measurement can be problematic.

For example, chart observation is good but has problems of legibility especially when notes are hand written (Donabedian 1968). Clinical records rely mostly on good record keeping and statements on patient management and diagnosis by the physician. Direct observation has limitations in that the patient is aware they are being observed which brings about issues of biasness. Administrative data is also unreliable as it lacks enough clinical details and instead focuses on charges and costs (Donabedian 2005; Peabody et al. 2004). However, its measurability and linkage to health outcomes makes the measurement of process the preferred way to assess quality (Bruce 1990; Peabody et al. 2004).

Outcome in terms of recovery, restoration and survival has been widely used as indicators of quality of care. Advantages of its usage are that the validity of outcome indicators e.g. perinatal mortality is rarely questioned. Furthermore, although some outcomes are unmistakable and easy to measure (death, for example), other outcomes are not.

Outcomes, which are not clearly defined such as patient satisfaction, are difficult to measure. It is also difficult to define whether treatment has been successful or failed. Donabedian (2005) cites an example by McDermott, Deuschle, Adair, Fulmer and Loughlin (1960), who showed that, although fixing a congenitally dislocated hip joint in a given position is considered good medicine for the white man, it could prove crippling for the Navajo Indian who spends much time seated on the floor or in the saddle. For this reason, outcomes should be used with discrimination.

Although good outcomes are the objective of all health actions, outcomes alone are not an efficient way to measure quality for two reasons (Peabody et al. 2004). The first is the quality conundrum. A patient may receive poor-quality care but may recover fully, or a patient may receive high-quality care for an illness such as cerebral malaria and still not recover. Secondly, adverse health outcomes are relatively rare and obviously do not occur with every visit to a health facility

Outcomes should also be used sparingly especially when health services have no major consequence on outcome. Exceptions where outcomes are not a good measure of quality are when factors such as lifestyle and socio-economic status are a major determinant of health. For example, in certain environments, health outcomes will depend on whether someone smokes or not (Mant 2001).

b. Who best defines quality?

According to Veney et al. (1993), many studies on quality in health care have relied heavily on provider's opinion. An inclusion of user's perspectives is important to balance the opinions. The importance of the incorporation of a client's perspective in the definition and measurement of quality of services has also been highlighted by the Joint Commission on Accreditation of Healthcare Organizations as cited by Veney et al. (1990): 'One thing that makes the concept of quality of services difficult to define is its inherent subjectivity; different groups give different elements of quality priority" (Veney et al. 1993: 248).

There is uncertainty about who appropriately and effectively defines quality. Is it the clients, providers, managers, policy makers, researchers, or by some or all of these (Peabody et al. 2004). According to Brown et al. (2005) user definition of quality care, meets their perceived needs and is delivered on time. Their definition focuses on effectiveness, accessibility, interpersonal relations and continuity.

From a physician point of view, quality is based on patient based outcomes, which are conceived independent of patients themselves (Brown 2005 et al.). As such, focus is on skills, resources and conditions necessary to improve health as well as accuracy and reliability of information, physical working conditions and number of patients attended to per hour.

There is need to identify the dimensions of quality in services perceived by clients of those services (rather than experts speaking for clients). Data must be collected from clients, former clients and potential clients to be analyzed on a comparative

basis (Brown 2005 et al.; Peabody et al. 2004). This will assure that the elements of services that clients view as important dimensions of quality will be included in an appropriately weighted way.

According to Peabody et al. (2004) it will further assure that areas of consistencies and inconsistencies amongst stakeholders are explicitly recognized. Only then can measures of quality be derived that take into account these similarities and differences between stakeholders.

Sajid and Baig (2007) also agree that assessments of health are often 'authentic and legitimate' if based on the application of professional standards integrating the patients' views, experiences and perceptions.

This has one major implication for this research as it only provides one perspective in exploring quality in health care. Although views from the providers were incorporated based on interviews with the Manager Human Resources, further interviews were required with the clinical personnel. This and other limitations will be discussed in chapter seven coupled with some recommendations for future studies.

2.5 Overview of the Health Care System in Zambia

Health care in Zambia

The Zambian health care system will be discussed with the view of establishing factors affecting quality. Before going any further, it is important to understand the framework within which health is delivered in Zambia. The role of the Ministry of Health (MOH) and ZCCM (privatised) in health delivery will also be articulated.

The MOH, a government body, is responsible for provision and coordination of health care in Zambia (Berman, Nwuke, Rannan- Eliya and Mwanza 1995). Prior to 1991 before the health reforms, the MOH managed health. In 1991, management shifted from the Ministry to district level. This was due to health reforms, which

attempted to improve quality of health through equity of access, affordability, cost-effectiveness and accountability (Hjortsberg and Mwikisa 2002). In 2005 though, management shifted back to the MOH, through the Provincial Health Offices (PHO) who currently oversee health facilities.

Health facilities in Zambia are divided into levels from the lowest, which are health posts and the highest, which are central hospitals. These include:

- Health Posts which cater for populations of 500 households (3,500 people) in rural areas and 1,000 households (7,000 people) in urban areas.
- Health Centres which cater for populations of between 30,000 to 50,000 people in urban areas and 10,000 in rural areas.
- First Level Referral Hospitals are found in most districts and serve a population of between 80,000 and 200,000 with medical, surgical, obstetric and diagnostic services, including all clinical services to support health centre referrals.
- General Hospitals or second level referral hospitals are found at provincial levels. These are intended to cater for a catchment area of 200,000 to 800,000 people, with services in internal medicine, general surgery, paediatrics, obstetrics, gynaecology, dental, psychiatry and intensive care services. These hospitals are referral centres for the first level institutions. They also provide technical back up and training functions.
- Central Hospitals cater for populations of 800,000 and above, and have sub-specializations in internal medicine, surgery, paediatrics, obstetrics, gynaecology, intensive care, psychiatry, training and research. These hospitals are referral centres for second level hospitals.

These facilities are either operated by the government or private individuals. The main providers of health care services in Zambia include: the MOH, Ministry of Defence, Ministry of Home Affairs, the mining industry, missionaries coordinated by the Churches Health Association of Zambia (CHAZ), private institutions, non-governmental organizations (NGOs) and traditional healers. During its operation

from 1982 to 1996, the mining industry through ZCCM operated the best facilities in the country.

ZCCM and health care

Even though ZCCM was state owned, its health facilities operated independent of the MOH. The Company ran excellent curative and preventive health programs in the seven towns it had operations. It operated twelve hospitals in addition to the sixty-six plant-side/community health centres (Simutayi 2008). Prior to privatisation, ZCCM facilities were the best funded in the country.

ZCCM accounted for approximately 24 per cent of the national health expenditure in 1990 (Fraser and Lungu 2006; Nwuke and Bekele 1995). The Company's contribution to total health expenditure was 11 per cent between 1995 and 1997 while the Governments' ranged between 18 – 22 per cent over the same period. Health services provided by ZCCM were considered the best, and were of high quality.

Health services provided included preventive (i.e., immunization and health communication) and specialist treatment (i.e., surgery, obstetrics, gynaecology, anaesthesia, ophthalmology, pathology and radiology). These services were strictly catering only employees and their families (Berman et al. 1995). These health facilities were provided at no cost to employees and their eligible dependents. The facilities were also divided into high-cost and low-cost categories.

The high-cost was used by managerial staff that paid a nominal fee each month while the low-cost was free to general employees. Despite these noticeable differences, the quality of health care was very high (Berman et al. 1995). In Luanshya, ZCCM operated two state of the art hospitals and five health centres. After privatisation, one of the hospitals was handed over to the government through the MOH. The mine has continued running two of the five health centres while the rest have been handed over to government (Fraser and Lungu 2006).

Challenges of health delivery in Zambia

The health sector in Zambia faces a significant number of challenges, which include the high disease burden compounded by the HIV/AIDS epidemic, lack of staff, lack of infrastructure, inadequate expenditure, and unavailability of drugs (Ministry of Health 2005). These challenges have affected the quality of health care delivered especially by the public sector and have spilled into the private sector especially with regard to staffing and drugs.

The HIV/AIDS prevalence rate in Zambia is 16.5 per cent significantly higher in comparison to sub- Saharan prevalence rate of 7.5 per cent and the global rate of 1.1 per cent. (Kaiser Family Foundation 2005). With regard to the Copperbelt Province, HIV/AIDS indicators show that the prevalence rate is 22.1 as compared to the national figure (Fraser and Lungu 2006). This has put a strain on health personnel and the quality of interpersonal care thereof. This strain on health personnel is further exacerbated by shortage of staff.

There is a critical shortage of health care personnel in Zambia because they continue leaving the country for greener pastures outside. The World Health Organisation (2000b) cites the International Organisation for Migration, who report that the number of doctors practicing in Zambia has declined from one thousand six hundred (1600) in 2001 to four hundred (400) in 2004. Coupled with this shortage of staff is inadequate funding.

Health infrastructure around the country has deteriorated due to inadequate funding. According to the World Health Organisation (2008), total health expenditure accounted for 5.6 per cent of GDP in 2006 in Zambia compared to the corresponding figure of 8.1 per cent in South Africa. As earlier indicated, people perceive the physical appearance of health facilities as a major indicator of quality of care. The lack of funding has knock-on effects on drug supply.

Accessibility to essential medicines is a major challenge. Drug supply to hospitals only meets 30-40 per cent of the requirements in urban areas. In rural health though,

health centres are generally well supplied as the provision of medicines is guaranteed by donors (WHO 2002).

2.6 SUMMARY

This chapter laid the theoretical framework for the study. Health care definitions included services that are aimed at prevention, diagnosis and promotion of care. Access to health care remains a major issue in determining utilization. Factors responsible for under-utilisation were addressed from the supply and demand side. Supply side issues relate to resources and their allocation and the quality of health care provided.

The main issues highlighted were from the demand side with reference to constraints and preferences. Constraints are determined by the income of the household, the charges made for health care, and costs incurred to reach health services. Preferences, on the other hand, are influenced by culture, knowledge of the potential benefits of health care, and the quality of the services available. The theoretical framework also assessed the types of strategies households adopt because of changes in quality.

Coping strategies were popular as households either maintained their levels of visits to health facilities or reduced. Those that maintain levels of attendance to health care facilities have developed some strategies which include selling food grains; selling livestock and poultry; private borrowing; borrowing from financial institutions; postponing repayment. Those that have reduced attendance have resorted to reducing food/other necessities; migration; delaying seeking for health services; shortening inpatient stay; seeking for cheaper services; not seeking medical services; delaying the payment of medical expense.

In the case of the quality measurements, a review of literature found that there is no single definition due to its multi-dimensional nature. As such, studies of quality in

health care all identify different dimensions which individuals deem important in their setting.

Additionally, review of literature also established that Donabedian's framework is widely used to measure quality. The main criticism against Donabedian's framework is that it assumes a relationship between structure and process, process and outcome. Although empirical evidence shows that a link exists between process and outcome, the link between structure and process is often not clear. Another limitation is differences in definitions between users and providers. For a good definition, a balance should be achieved.

An overview of the functions and responsibilities of the Ministry of Health (MOH), and the mines in Zambia was given. Challenges in health delivery and their implications thereof on quality were also discussed. Major challenges identified included high disease burden compounded by the HIV/AIDS epidemic, lack of staff, lack of infrastructure, inadequate expenditure and unavailability of drugs.

Now that the theoretical framework has been set, the next step is to explain the methodology employed by this study.

CHAPTER 3*:* METHODOLOGY

3.1 INTRODUCTION

Eight sections comprise this Chapter. Firstly, the study design is discussed; Secondly, the research site is described; Thirdly, sampling is discussed; Fourthly, data collection is explained; Fifthly, ethical considerations are given; Sixthly, methods of data analysis are provided; Seventhly, an assessment of the research's validity and reliability are depicted and Eighthly, challenges faced are presented.

3.2 STUDY DESIGN

The study used combinations of qualitative research methods. Qualitative research as defined by Strauss & Corbin (1990) is "any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification". Furthermore, Harding and Gantley (1998) add that qualitative research is based on the "exploration of how people make sense of their social world, in-order to provide insights into people's health related behaviour that is not readily accessible through surveys" (78). Moreover, qualitative methods produce analytical insights from recounted experiences, beliefs and views (Harding and Gantley 1998; Neuman 2000).

Qualitative methods are, therefore, the best way to answer this research questions aimed at exploring changes of quality in health care before and after privatisation of ZCCM as perceived and experienced by households in Luanshya. The study also aimed to explain the changes and argue the relevance of Donabedian's framework with the intention of proposing a blueprint framework for conceptualising quality in health care for the Zambian context.

Due to the suitability of qualitative research methods to this study, combinations of in-depth interviews with key informants, focus group discussions with households and document analysis were adopted for data collection.

3.3 RESEARCH SITE

The study was conducted in Luanshya town, which is based on the Copperbelt Province of Zambia. According to the 2000 census, it has a population of about 115,579 people (Central Statistics Office 2000). Three townships, which served as the population for the study, were Town centre area, Mpatamato and Roan townships.

3.4 SAMPLING

In-depth interviews were conducted with the Manager Human Resources for Luanshya Copper Mines (LCM) Plc, and the District Director of Health. In addition to this, focus group discussions were held with sixty people from Town centre area, Mpatamato and Roan townships. Analysis of relevant documents was also undertaken. Sources of data are provided in detail in Table 3.1.

Table 3.1: Sources of data

SOURCE	DESCRIPTION	NUMBER
In-depth Interviews	Manager Human Resources LCM	1
	District Director of Health	1
Focus Group Discussions	Respondents selected from sixty households	60
Document Analysis	Zambia Privatisation Agency (ZPA) impact assessment study	1
	National newspapers	3

Sampling for In-depth Interviews

Purposive sampling was used for the two in-depth-interviews. Purposive sampling is used to select people deliberately because their views are relevant to the issue concerned (Coyne 1997; Strauss & Corbin 1990). For the purpose of this research, in-depth interviews were conducted with the District Director of Health, and the Manager Human Resources at LCM Plc. The District Director of Health, as the overseer of all health services in Luanshya, provided insight into the delivery of health in the whole town while the Manager Human Resources at LCM Plc gave insight into the Company's' provision of health care.

Recruitment of participants for focus group discussions

Research participants were recruited with assistance from the Manager Human Resources at LCM Plc. Participants were drawn from formal groups at health centres such as drama and women's groups. The pre-requisite for participants was that they should have used health facilities during ZCCM and LCM operations.

Once potential participants were identified, they were informed about the research, its aims, the research process and their role. Participation was strictly voluntary. Upon volunteering participants were provided with participant information sheets, which outlined the purpose of the research and what was expected of them as well as their rights (see appendix II). The form also assured the participants of the researcher's highest regard for confidentiality.

Selection of documents for analysis

Because information on health care in Luanshya was readily available through in-depth interviews with key informants, the purpose of document analysis was to provide details on privatisation of Luanshya Division. As such, important documents included information from newspapers and the Zambia Privatisation Agency (ZPA), the forerunner to Zambia Development Agency (ZDA).

The ZPA impact assessment report provided the historical background to privatisation. In addition, three daily newspapers, The Post, Times of Zambia, and Zambia Daily Mail gave detailed information on changes in ownership of the mine.

3.5 DATA COLLECTION

In-depth interviews

According to Fitzpatrick and Boulton (1994), in-depth interviews allow the interviewer to obtain detailed information. In-depth interviews also give extensive and detailed views of the research problem (Leedy and Ormrod 2001). In-depth interviews were used to get the official response about the provision of health in Luanshya by both the mines and the government.

Appointments were personally made a week in advance with the relevant officers. During the time the appointments were made, the participants were briefed about the purpose of the research. Interviews were held at their respective offices to allow them speak freely. An interview guideline as shown in appendix I was used. All interviews were tape-recorded and were conducted in English. Notes were also written in addition to tape-recording where clarification was needed. In-depth interviews lasted between thirty-two (32) to fifty-eight (58) minutes.

Focus Group Discussions

Focus group discussions were adopted because they are increasingly being used in the assessment of health care, as they are necessary in obtaining local views. According to Hennink & Diamond (1999), the aim of focus group discussions is not to gather information about individuals as with in-depth interviews, but to get a feel of the communities' response to certain topics. As such, focus group discussions

allowed group members to contribute freely about their experiences in relation to quality in health care.

Focus group discussions were conducted at the various mine health centres except for those in Mpatamato, which were conducted at a volunteer's homes. Participants were given participant information sheets seven days before the discussions were conducted. On the day of the focus group discussions, all participants introduced themselves. The introductions included names as well as demographic information such as age and occupation. After the introductions, first and foremost, it was important to go through the participant information sheet with the participants in order to clarify issues.

Participants who needed clarification were given a chance to ask questions. All participants had no problems or questions relating to the participant information sheet. Afterwards, participants were guided through the informed consent forms for focus group discussions and tape-recording. Upon agreement with the terms and conditions, all participants signed the forms. A template of the consent forms for focus group discussions and tape-recording are included in appendix III and IV respectively.

Participants sat in a horseshoe formation, which allowed everyone to have a clear view of each other. Once participants were settled, their approval was requested so as to start the tape recorder. Focus group sessions lasted between fifty-five (55) to eighty-three (83) minutes. Throughout the process, a two-page question guideline was used (Appendix I). Additionally, notes were also written as a reminder of important or follow-up issues as the discussions progressed.

All the sessions were conducted in Bemba, after which they were translated and then transcribed in English. There is always a risk of losing meaning as conveyed by participants during translation especially with certain words, which do not have

English equivalents. Efforts were made to maintain the validity of what was said as the researcher is Bemba speaking and well knowledgeable of the culture on the Copperbelt having lived there for more than 20 years. Where certain words or phrases could not be translated, their meanings were provided. Although most participants were fluent in English, the interviews were conducted in Bemba to enable full participation and avoid discomfort for the non-English speakers.

To ensure that confidentiality was upheld, subsequent to the interviews the tapes were stored in a secure place during the transcription period. The tapes have been archived in a personal library and any form of identification has been removed.

Document analysis

Another qualitative method used was document analysis. According to Bryman (1989), document analysis is important in obtaining information that cannot be obtained in any other method of data collection. In addition to this, it is useful in checking the validity of data collected. Document analysis was used as a method of data collection on issues around privatisation of Luanshya Division. As such, local newspapers and the impact assessment report by ZPA were analysed.

Caution was exercised with selecting newspapers to review due to validity and reliability of information. For example, of the three newspapers analysed, two are state owned while one is privately owned. To ascertain the validity and reliability of information, stories were crosschecked in all three newspapers.

3.6 ETHICAL CONSIDERATIONS

Permission was sought from University of the Witwatersrand's ethics committee, the Zambian MOH and from LCM Plc. All procedures outlined in the 'participant information sheet' were complied with. The aims and the benefits of the study as well as the participants' roles were explained in the participant information sheets.

Also included were the interviewers name and contact details, criteria for participating in the study and language to be used for the study.

Prior to every focus group session, participants were reminded of the study aims. They were also given the option to either continue or discontinue with the discussions. Upon agreeing to go ahead, they were asked to sign the consent forms in line with the research ethical standards. Two consent forms were used: consent for focus group discussions and use of audio- tape to record the focus group sessions (Appendix III and IV, respectively).

There were no reported or observed adverse effects on the participants throughout the interview/ focus group discussions. All information given by the participants of focus group discussions was treated as confidential. As a result, anonymity of the informants in this research was maintained by use of pseudonyms. Pseudonyms replaced the correspondents first and second names in the write up and the transcriptions, in order to ensure the anonymity of their perceptions. After the end of the discussions, participants were thanked for their time in participating in this research.

3.7 DATA ANALYSIS

According to Miles and Huberman (1994:10), data analysis is used to look for patterns and relationships in the data that is collected. Overall, data analysis involves organising data that has been collected so that sense is made out of it (Smit 2002). Data analysis is a two way process; firstly, it involves the selection of relevant data, and then secondly, the categorisation or coding of data (Smit 2002).

Once data was collected from the in-depth interviews and focus group discussions, participants' responses were transcribed verbatim to allow for easy analysis of the text. Thematic data analysis was utilised to analyse the data. Thematic data analysis is highly inductive as the themes that emerge from the data are not in any way imposed by the researcher (Braun and Clark 2006). It involves the application of

codes to data collected. Closely related to this method is comparative analysis, which was used to compare and contrast data from different people (Tere 2006).

The first step of analysis involved multiple reading of the raw data to identify perceptions, experiences, feelings and attitudes. Responses that were deemed important for the study were categorized into themes that were commonly used by participants. Also categorized were words and phrases, which held particular meaning in the answering of the research question. Words and phrases with similar meaning were coded into themes thereby reducing responses into manageable units (Smit 2002). With comparative analysis, the researcher would move backwards and forwards between the data (Tere 2006).

Themes that were not relevant to the study were not discarded as they allowed for surprising findings. The categorisation of data was used until it was clear that no new themes emerged from the raw data. Themes were then categorised according to the interview questions although not exclusively as there was a tendency to overlap.

3.8 VALIDITY AND RELIABILITY

Issues of validity and reliability are not as important in qualitative research as they are in quantitative research (Ambert, Adler, Adler and Detzner 1995). However, both are important in judging the quality of the study through research design and analysis of the study (Golafshani 2003). Validity is defined as the trustworthiness or credibility of information (Golafshani 2003).

Validity in this study was assured as all households interviewed had first- hand experience of health care before and after privatisation of ZCCM. The sample of participants was also representative as it included all three mine residential areas in Luanshya. In addition, data from the in-depth interviews and focus group discussions was crosschecked with literature in order to draw a conclusion. However, the results obtained from the study cannot be generalized to Luanshya or in fact, the rest of the Copperbelt mining towns as the findings are only applicable

to the households who took part in the study. The findings can, however, be helpful in developing thinking around similar cases. Hence, in Chapter 6, the report proposes a blueprint for conceptualising quality in health care.

Simply put, reliability can be replaced with dependability (Golafshani 2003). According to Ambert et al. (1995), a reliable measure shows the same result or elicits same response when read repeatedly. A close link between research aims, research questions and interview schedules, which guaranteed the reliability of this study were maintained.

Triangulation, which is the use of multiple sources of data, increased the reliability of this research (Golafshani 2003). Three methods were used to substantiate data sources. A combination of in-depth interviews, focus group discussions and document analysis. While focus group discussions helped in gaining insight into perceptions and experiences concerning access to health care, in-depth interviews and document analysis were used to validate the data from households.

3.9 CHALLENGES

There were three notable challenges faced in this study with regard to the methodology. One of the challenges was the delayed permission from the MOH. Despite applying for permission in June 2008, official permission was only given in October 2008.

On a number of occasions, focus group discussions were rescheduled at the last minute due to non-availability of "important members". To ensure that everyone was present, the discussions were held in the afternoons to enable participation for those who go to the farming fields in the mornings.

The research also required a lot of travelling within Luanshya. This put financial strain as fuel was required for the vehicle.

3.10 SUMMARY

The study used qualitative methods to provide insight into the perceived changes of quality in health care after privatisation of ZCCM. The study was conducted in three mining townships in Luanshya involving sixty respondents for focus group discussions. In addition, interviews were conducted with the District Director of Health, and the Manager Human Resources at LCM Plc. Also analysed were documents relevant to the study such as national newspaper articles.

Informed consent was obtained from all the participants in writing. Interviews were all tape-recorded while notes were also written where clarification or follow-up was needed. Participation in this exercise was voluntary and confidential.

A combination of thematic and comparative data analysis was used. Thematic data analysis was used to identify themes that emerged from the data while comparative analysis was used to compare and contrast data from different people. Themes were then categorized according to the interview questions, although not exclusively as there was a tendency to overlap.

Validity and reliability of information was guaranteed by getting a good representative sample as well as triangulation of information. The main challenges faced were delayed permission, postponed discussions and financial strain due to travel.

CHAPTER 4: RESEARCH FINGINGS

4.1 INTRODUCTION

This chapter describes the results of focus group discussions, in-depth interviews and documents analysed between October 2008 and January 2009. Focus group discussions were conducted with households who accessed mine facilities before and after privatisation of Luanshya Division. Focus group discussions gathered information on household's perceptions of changes in quality in health care at mine facilities before and after privatisation. In-depth interviews were undertaken with the District Director of Health for Luanshya District, and the Manager Human Resources at LCM Plc. In addition, documents relevant to the study such as national newspaper articles were analysed.

The results of the study are presented as follows; firstly, an overview of Luanshya is provided, secondly, focus group discussion with households are presented, thirdly and fourthly, the in-depth interviews with the District Director of Health, and the Manager Human Resources are described, respectively.

4.2 OVERVIEW OF LUANSHYA

Luanshya Town

Luanshya is a town in north central Zambia, located southwest of the Copperbelt administrative capital, Ndola as shown in Figure 4.1. Mining is its primary industry and metal fabrication, notably copper wire, dominates the manufacturing sector. Agriculture in the surrounding areas is small-scale and marginal, reflecting the poor quality of soil due to high mineral content. Luanshya inhabitants are ethnically diverse and primarily Bemba speaking.

Established in 1930, the town's main purpose was to accommodate workers from the Roan Antelope Mine, exploiting a rich copper-cobalt deposit discovered in 1926. Luanshya developed around two centres, a company-controlled mine

township, and an administrative township owned by the Government. This research is based on three mining townships; Mpatamato and Roan Townships as well as the Town Centre area (Stocklobster 2008).

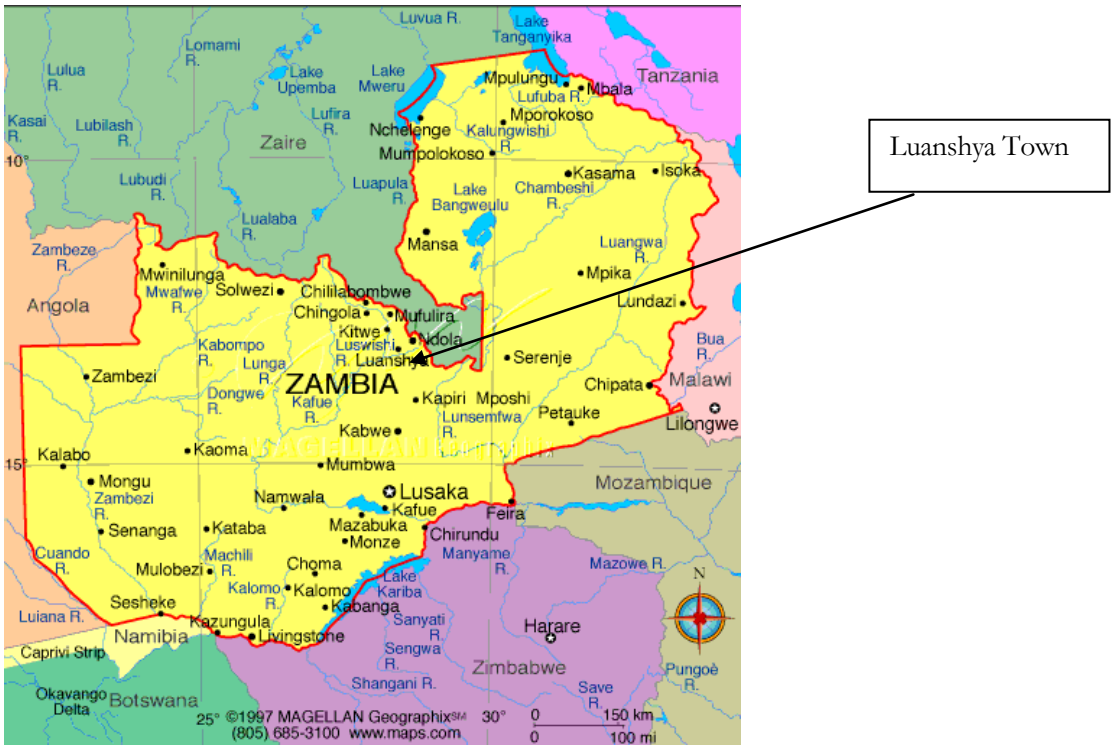


Figure 4.1: Location of Luanshya in Zambia

Source : http://www.media.maps.com

Privatisation of Luanshya Division

When ZCCM assets were unbundled and packaged in 1996, Luanshya Division included an underground mine, a smelter and a concentrator. At the time of privatisation, Luanshya Division of ZCCM was the first to be sold off, as it has been (historically) one of the most productive mines on the Copperbelt accounting for 15 per cent of ZCCM's total revenue (Craig 2001). Ownership of the Luanshya mine has changed four times since privatisation of ZCCM.

After privatisation in 1997, Roan Antelope Mining Corporation (RAMCOZ), owned by the Binani Group[1], was the first Company to take ownership of the mine.

[1] A London based metal trader with operations in India

According to Situmbeko and Zulu (2004), operations during RAMCOZ were plagued by frequent interruptions in production due to liquidity problems. RAMCOZ's debts worsened during its two and half years of operation, until the company was finally placed under receivership in 2001 by Zambia National Commercial Bank, one of its main creditors in a bid to recover money owed to it (Kangwa J 2001).

After 3 years of being under receivership, the mine was re-opened in January 2004[2]. The mine was renamed Luanshya Copper Mines under the ownership of Enya Holdings BV, jointly controlled by the Bein Stein Group Resources of Israel and the International Mineral Resources with 85 per cent shares while 15 per cent shares were held by government through the ZCCM-IH[3].

However, due to low productivity and falling copper prices on global markets, LCM was in December 2008 placed under care and maintenance[4]. In January 2009, the Zambian government took over the running of the mines until an appropriate investor is found to take over operations[5]. This research was conducted when LCM Plc was in operation.

4.3 FOCUS GROUP FINDINGS

Focus group discussions were held with households from three mining townships. The findings from these discussions are divided into three sections, namely, demographic characteristics of the respondents; an overview of household's perceptions into the privatisation of Luanshya Division of ZCCM and; the findings of household's perceptions and experiences with regards to the changes of quality in health care before and after privatisation.

[2] Times of Zambia January 22, 2009 "LCM finally terminates miners' employment"

[3] Zambia Daily Mail January 20, 2009 "LCM Takeover bid cheers union"

[4] Sunday Post January 11, 2009 "Bailiffs seize 5 Isuzu pickups from LCM" and Zambia Daily Mail January 22, 2009 "LCM workers get benefits"

[5] Zambia Daily Mail January 20, 2009 "LCM Takeover bid cheers union"

4.3.1 Demographic Characteristics

This section explores respondent's demographic characteristics. The demographic information includes gender, age, occupation and livelihood strategies. Whereas the gender, age and occupation were provided prior to the focus group discussions, the respondent livelihood strategies were derived as the interview progressed. These characteristics are important in understanding household's perceptions towards the changes in quality of care.

4.3.1.1 Gender

Table 4.3.1.1 indicates the gender characteristics of the respondents. Females accounted for forty-two (42) of the total number of respondents. Only eighteen (18) of the respondents were male. Due to the working hours in the mines (07:00hrs to 16:00hrs, and 16:00hrs to 07:00hrs), male respondents were few.

Table 4.1.: Gender characteristics of respondents

	No. of Respondents
Female	42
Male	18

4.3.1.2 Age

Table 4.3.1.2 shows the age distribution of the respondents. Respondents were categorized in different age groups for exploring patient perception of changes in the quality of health. The majority of the respondents fell into the forty-five (45) to fifty-five (55) age range.

Table 4.2: Age profile of respondents

	No. of Respondents
35-45 Years	13
45-55 Years	45
55-65 Years	2

4.3.1.3 Occupation of respondents

The occupation status of respondents is described in Table 4.3.1.3. Housewives (25) formed the largest part of the respondent group. The rest of the respondents were as follows; unemployed (10), contractors to LCM (8), retired (4), LCM employees (6), and those in informal employment (7).

Table 4.3: Occupation profile of respondents

	No. of Respondents
Unemployed	10
Retired	4
Informal employment	7
Housewives	25
Employees of LCM	6
Contractors to LCM	8

4.3.1.4 Livelihood strategies

As the discussions progressed, it was observed that households engage in different activities for income, including those in formal employment. Selling vegetables, farming, selling of food grains, selling poultry and running a kiosk were among some of the livelihood strategies. The most popular strategy is selling vegetables. Vegetables sold include tomatoes, onions and rape. Running a kiosk constitutes the second most popular. Equivalent to Spaza shops in South Africa, kiosks stock household items from cooking oil, sugar to sweets. Farming includes maize and groundnuts. Farming of these produce is just for consumption purposes. Maize is taken to the local mills to convert to mealie meal thereby reducing the cost of buying food.

4.3.2 Understanding of privatisation

At the beginning of the focus group discussion, respondents were asked to demonstrate their understanding of privatisation in order to fully understand its effects on changes of quality in health care. All respondents had a negative perception of privatisation as it led to the loss of social services and amenities, loss of jobs, insufficient pensions and increase in prostitution.

Loss of social services and amenities

ZCCM provided various social amenities at no cost. This ranged from free nappies at birth, education, health, electricity, water, and even a coffin when one dies. In praising the old services, one of the respondents said:

> *"Everything was free when you give birth, you would find nappies at the clinic…really ZCCM did a good job. They spoon fed us…we didn't know how to pay for electricity; we didn't know how to pay for water. And anything that had to be repaired in a home, ZCCM was responsible for."*

Household's perceptions on social services and amenities have changed since privatisation as one of the respondents expressed:

> *"Now we are like orphans…we have lost our father and mother. We now have to pay for things we never had to before. We are feeling the pinch."*

Lack of housing is an issue, which is linked to privatisation of ZCCM. The general feel among households is that even though the sale of houses to sitting tenants in 1996 was done in good faith, it has affected the provision of accommodation to new employees When a miner started work during ZCCM, they were given free accommodation as one respondent expressed:

"When I married my husband, I joined him in Luanshya. We were given a house…a bachelor's flat. Accommodation was given depending on the post held."

In 1996, the then Republican President made a decision to sell mine houses to sitting tenants as one of the respondents explained:

"Now the former President decided to sell houses to sitting tenants in 1996. Although it was politically motivated, what he did was good as it gave some of us opportunity to own houses. But now when people join the mines, there are no houses and I heard it's very expensive to rent..."

New employees are affected by the shortage of housing as one respondent conveyed:

"My son started working for the mines in 2003. Up to now, he has not found a house. He is squatting with us…and he brought along a friend he works with."

Although the sale of houses was done in good faith, there is a general view that some people have put them up for rent and opt to go to rural areas as one respondent added:

"It was a very good thing to buy the houses, but you find that people are putting them up for rent as they are failing to survive. Everything was paid for in these houses starting from water, electricity and even land rates. The needs in the towns are now too much, the village is better as you have no such pressure."

Because of privatisation, there seems to be an increase in the monthly bills with regard to electricity and water. The households provided insight to the fact that

electricity charges have increased since privatisation. Prior to privatisation, ZCCM paid for all electricity and water/sanitation requirements of its employees. After privatisation, the households were required to meet the costs. In expressing the fact that households now have to pay for these services, one respondent lamented:

> *"We can't afford to pay bills for electricity. Paying for electricity at ZESCO is too much…first; the pay we get is too little. If you leave an outstanding credit of US $ 50[6], they will automatically disconnect your power. Even if you beg them, they won't listen."*

Commenting further on electricity, another responded exclaimed:

> *"People are now sleeping in the dark while some have a lot of electrical appliances which are not being used and are collecting dust. This is even worsened by the power rationing. As we speak, there is no power in the township…we are forced to use alternatives such as charcoal which is also becoming too expensive."*

Similar sentiments arose with water and sanitation requirements. There has been a supposed change in the provision of water and sanitation services. ZCCM provided water and sanitation services free as one respondent described:

> *"Water was free, we could water our surroundings ...the grass was always green…they also gave us rubbish bins ...so this contributed to our clean surroundings."*

A respondent complained about the changes that households have experienced:

[6] Exchange rate in September 2008 was US$1=ZMK3500

> *"Now it is difficult to maintain clean surroundings. Like now…I was talking to the water utility company. ..they are just stealing our money and yet the water quality is not good. In all the 30 years I have stayed in Luanshya I have never drunk water that smells as much as ours does."*

The closure of health facilities seems to have worsened perceptions of privatisation as one respondent expressed:

> *"They closed down all the clinics in Mpatamato. They even closed Roan Mine Hospital. So now tell me, where do we go when we are sick?"*

Another respondent added:

> *"We don't even bother to go to hospitals anymore. The distances, and the cost of travel is too much. We'd rather visit the local Chemist."*

The withdrawal of educational allowances is also associated with privatisation. Miners under ZCCM used to get education allowances for their children, but now they have to pay for their children's education from their own pocket as respondents frequently lamented:

> *"Our children used to go to mine schools…if not, we earned enough to pay for them at government institutions, which are fee paying."*

Another respondent complained:

> *"ZCCM even gave bursaries for student who excelled in form 6... After my son did well, he got a bursary to study accounts at a renowned ZCCM accounts college."*

In addition, there is an observation that the withdrawal of library services has affected education performance of students as one respondent communicated:

> *"We even had libraries…our children used to read from the libraries which were well equipped. Children never needed extra tuition to pass...they had all they needed from the libraries. Now we have to folk out money to spend on extra tuition classes."*

Some respondents connected privatisation to the closure of community centres. ZCCM had community centres, which were open to women, men and the youth as one respondent described:

> *"We had community centres in those days…..women were taught life skills such as knitting table clothes, tailoring and cookery while men had carpentry workshops."*

In appreciation of these centres, a respondent added:

> *"For some people, this has become their source of livelihoods as they learnt a lot of skills. I know people who are now running restaurants and have big tailoring shops from the skills they learnt."*

It seems the closure of community centres has angered most households as one respondent expressed:

"But all these facilities have been left unmanaged… they are dilapidated infrastructure. Some of them have been turned into bars."

Lack of jobs

Lack of jobs because of privatisation frequently came up in the focus group discussions. During ZCCM, Luanshya was alive with many industries in operation as a respondent expressed:

"Everyone in Luanshya was directly or indirectly employed by the mines. There was a when more that 8,000 people worked for the mines."

In support of this statement, another respondent added:

"Industries that were dependent on the mine industry were in full operation before privatisation. There were international companies such as Dunlop. Big local companies also operated here. In Luanshya, we even had one of Zambia's largest clothes manufacturing Company, Serios. When someone finishes school, they were guaranteed a job."

After privatisation, there is an apparent feeling that there is a lack of jobs as a respondent exclaimed:

"Even if our children finish school, they will not be able to get jobs as there are no jobs here since privatisation. There are a few people currently in employment."

To append to this, an emotional respondent interrupted:

"….Our children are forced to become thieves due to lack of jobs. They go into taverns as early as 09:00hrs….we are breeding criminals."

Insufficient and delayed pensions

There was a consensus that pensions received by households because of privatisation were delayed and insufficient as one respondent complained:

"Most of us got pensions… you can't even call them that. My husband worked for over 30 years. Thirty years of service is no joke… for all that work he got a small sum of US $ 7500…."

Another responded barged:

"Some of us got our monies 2 to 3 years after privatisation. The pensions finished very quickly…because now we have so many bills to pay."

Some angry women explained the misuse of pension money by their husbands:

"My husband got close to US $ 8000 which he spent on other women when he had children in school."

Prostitution

Respondents also attributed the increase in prostitution to privatisation. Respondents expressed concern at the fact that due to reduced incomes and men seeking employment out of town, women are increasingly involved in prostitution. Some respondents articulated:

"People are worried about what they will eat…if they are widowed; some of them go into prostitution for as little as US $ 2 so that they can survive. Young girls in houses are also

engaged on prostitution in order to earn much needed money for households."

Some respondents castigated the men for promoting high levels of prostitution especially men who are employed out of town:

"The worst part is that they (husbands) go there (other towns on Copperbelt province) looking for jobs, but they get side tracked...they are tempted so most of them get girlfriends….while we are home waiting for money."

There seems to be consensus that the high levels of prostitution have knock-on effects on the prevalence of HIV/AIDS. A large number of respondents expressed concern at high deaths due to HIV/AIDS:

"Every funeral you see is due to HIV/AIDS…even though some lie and say its malaria. We know the causes!"

4.3.3 Household perceptions and experiences in changes of quality at health facilities before and after privatisation

Focus group discussions provided some details into household's perceptions and experiences into the changes of quality in health facilities. Household views into the dimensions that indicate changes of quality in health care were highlighted to include: cleanliness of facilities, availability of ambulances, travel distances, cost of care, staffing levels, staff attitudes, drug availability, waiting times, patient diagnosis, and satisfaction with treatment procedure, specialist services and preventive health care.

Cleanliness of facilities

Respondents alleged that quality in health care has changed due the deteriorating levels of cleanliness at facilities. Respondents complimented ZCCM health facilities

as in their view, they were better looked after. The excerpt below detailed the surroundings at ZCCM health facilities:

> *"You would know a ZCCM health facility when you saw it because the surroundings were beautiful. The grass was always green; the buildings were clean...always newly painted."*

In praise of the wards, the respondent continued:

> *"The wards were also clean…you didn't get that funny hospital smell that you would find in government clinics. The wards used to always smell of disinfectant, the beddings were clean; they even had small details like curtains and even flowers…"*

It seems that since privatisation, surroundings at the facilities seem to have transformed as one respondent lamented:

> *"Look at the way this clinic looks. The grass is dry because the lawns are un-watered*."

Poor cleanliness after privatisation is not restricted to the surroundings alone. It appears that the insides of the buildings have transformed as well as one respondent expressed:

> *"The floors are dusty, it seems that they can't even afford cobra (shining wax).The windows are also dirty…surely how can one expect proper care from a facility that looks like this?"*

Availability of ambulances

There has been a perceived change of quality in health care due to lack of ambulance transport. During ZCCM, referral transport was readily available as a respondent described.

"Transport was available everyday from the clinics to the hospital…"

Since privatisation, the ambulance is only available twice weekly. The households perceive this as inadequate as expressed below:

"The ambulance is only available on Tuesdays…and I think Thursdays. So if I get sick on other days of the week, it means I have to find my own transport?"

Another respondent added:

"In addition, you have to wait a long time for this transport. Look at those people sitting outside there by the benches; they are waiting for the ambulance to take them to the hospital. They have been here since 07:00hrs and its now 10:00hrs."

Not only was ambulatory care available every day, but transport was also offered to relatives and friends to accompany the patient during transportation. The apparent changes are explained by another respondent:

"With ZCCM, the ambulance used to carry one patient at a time. As such, up to four members of the family could accompany the patient. Now the number of accompanying relatives and friends is restricted to only 1 person per patient."

Travel Distances

There is an apparent view that quality has changed as the travelling distances have increased. Before privatisation, health facilities were distributed to provide care to the community as close as possible as expressed by a respondent:

"Health was provided to cater for sections in mining townships. In Luanshya, we had five clinics, people didn't have to travel more than 5 kilometres. With hospitals, we had two major ones. One catered for the town area and then the other, was here in Roan. The people in Mpatamato only had to travel 5 kilometres."

At privatisation, the closure of selected facilities increased the travel distances to health centres for residents in Mpatamato and selected areas of Roan townships as explained by a respondent:

"We have no mine clinic here in Mpatamato. We have to go to Section 5 in Roan Township which is about 5 kilometres."

The travel distance to the one remaining hospital has also increased as households in Mpatamato and Roan townships have to travel between 10 and 15 kilometres as detailed by one respondent:

"The mine hospital, which catered for the communities in Roan and Mpatamato townships, was handed over to the government, so now we have to travel long distances to get to Luanshya mine hospital which is on the other side of town."

Another respondent explained the implications of increased travel distances on households:

"Most of the time we just walk. If the patient is too serious, we carry them on the back. Wheel barrows and bicycles are also good alternative forms of transport."

Cost of travel

The perceived unavailability of ambulances and increase in travel distances seem-to have increased the cost of travel for some households especially in Mpatamato and Roan Townships. This is because at privatisation, selected health centres in Mpatamato and Roan townships either closed down or were handed over to the government. There are increased costs for residents in Mpatamato as explained by a respondent:

> *"We pay US$ 1 to get on a mini bus to go to Roan Township. We have no mine clinic here in Mpatamato. We have to go to Section 5 in Roan Township. Sometimes if we don't have the money, we just walk."*

The cost of accessing the one remaining hospital has also increased as households in Mpatamato and Roan townships have to travel between 10 to15 kilometres as detailed in the excerpt below:

> *"Because we now have to access Luanshya Mine Hospital which is on the other side of town, we are forced to pay at least US $ 1 to 2."*

The situation is worse for serious patients as households have to book private transport in form of a taxi:

> *"To transport a patient from home to the Hospital can be between US $ 5 to 10."*

Staffing levels

The respondents bemoaned the low staffing levels in LCM owned health facilities, which in their opinion, has affected quality in care. Under ZCCM, health centres were adequately staffed as detailed by one respondent:

> *"Clinics under ZCCM were manned by six nurses at any given time. At the maternity ward, you would have three nurses and there were three others conducting other duties. In addition, doctors used to visit the clinics at least three times a week."*

The respondents bemoaned the poor staffing levels at health centres since privatisation:

> *"Now at the clinics, it's a sad sight. There are two nurses, a cleaner and a security guard. Now tell me, when you are sick, what can a cleaner and a security guard do to help?"*

It appears the lack of staff has also affected the hospitals. Households bemoaned the lack of nurses and doctors as a respondent lamented:

> *"…as for hospitals, doctors …it's a sad story…You find that there is only one doctor doing the rounds in the ward as well as seeing the patients for consultation. For one to see a doctor now you have to wait in a long queue."*

Staff Attitudes

The respondents also hold the view that the attitudes of staff towards the patients have changed drastically affecting quality in care as the excerpt below revealed:

> "*Under ZCCM the nursing staffs were friendly, and well dressed making them approachable. They were also very considerate."*

After privatisation, the attitude of the staff seems to have worsened. One respondent explained:

"Nurses don't care about the patients anymore. They don't have compassion and have become very rude!"

To this, another respondent added:

"Nurses can make you wait for up to an hour without consulting you. I have heard of instances when nurses are locked up in their rooms chatting to each other over a cup of tea as the patients wait. That's just being mean…"

However, one focus group gave the reason in changing attitude as follows:

"You have to understand that these nurses are so few and have a lot of work to do. It's really not their fault. It's all the mines fault. They are to blame for the state of the nurses. They are always too tired. They do too much and it is emotionally draining."

Drug availability

The unavailability of drugs seems to have affected quality in health care. Respondents lamented the unavailability of medicines at mine owned health facilities after privatisation. Before privatisation, medicines were readily available resulting in effective treatment as one respondent detailed:

"When you go to a ZCCM health facility, medication was always available. It didn't matter what you were suffering from. For example, if you coughing, they would give you cough syrup. If you have malaria, they would give you chloroquine, quinine or any medication available at that time."

It seems there is lack of medication at health facilities since privatisation as explained by one respondent:

"Now there is no medication. The only prescribed medicine available is Panadol! If you have diarrhoea, a cough, a flu, malaria…anything they give you Panadol. I can get Panadol from the streets so why bother going to the hospital? "

Another respondent added:

When you go to the clinic…they have no medication. They will instead give you a prescription to go and buy medication from a chemist. This means using your own money instead of the Company."

The lack of medicine is also proving to be expensive as people are being forced to buy their own medication rather than being provided by the facilities:

"When we go to the health facilities, they write a paper for you to go and buy from the chemist because not all medicine is available. In the past…it was unheard of…in a mine hospital...never!"

Waiting times

There was consensus among the households that waiting times have also increased affecting quality in health care. In some instances respondents complained that they wait for up to 8 hours to see a doctor. The excerpt explained:

"In ZCCM, when one goes to the hospital in the outpatient department, let's say at night when there is an emergency, the doctor on call would quickly come. But now things are different. You would wait for the doctor to come…in most cases the doctor would only show up in the morning."

Another respondent interjected:

> *"There are cases were people have died in the queues while waiting for the doctors!"*

Waiting times was also translated by some respondents into the time they wait to be transferred to hospitals as one respondent explained:

> *"You see those people that are sitting outside the clinic? Some of them have been there since 07:00hrs. This is now 10:00hrs and they are still waiting to be transferred to the hospitals".*

Accuracy of patient diagnosis

There has been a notable decline of quality in health care with respect to patient diagnosis. During ZCCM times, medical personnel took their time in diagnosing a patient. The nursing staff would run a full range of tests to rule out certain ailments as one respondent observed:

> *"When you go to the clinic…the nurses would get all the vitals such as temperature and blood pressure. They would even do a malaria test. This was irrespective of your ailment. They were very thorough."*

It seems that is not the case since privatisation as enlightened by one respondent:

> *"Now when you go to the clinic they don't bother to do a thorough diagnosis. Diagnosis is based purely on what you are complaining about."*

Another respondent added:

"For example sometimes when I have malaria it feels like flu. When I go to the clinic, they don't bother testing me for malaria even though I tell them its malaria. I always end up treated for flu while the malaria is still in my system. Now imagine if they ran the tests before diagnosing, they would know I have malaria. So now, I have given up. Immediately I feel I have flu, I buy malaria medication from the chemist."

Patient satisfaction with outcome

The respondent indicated that patient satisfaction with the procedure of treatment has changed thereby undermining quality of care received. All respondents agreed that during ZCCM a visit to the hospital led to effective treatment as one respondent explained.

"Under ZCCM, treatment was effective. One only needed to go to the hospital once and their ailment would be treated. People never used to go to the clinics and hospitals as regularly as they do now."

Some of the respondents complained about their satisfaction since privatisation:

"Now we are not satisfied. For example under the ZCCM, one would obtain the results of a malaria test within a day. After privatisation, the results take much longer to come out….they take as long as two days to come out by which you would be seriously sick to the point of death."

Another respondent added:

"Yes I agree. It's now difficult to cure even flu. I think it's because most of the medicine they use now is expired. You are better off going to the chemist!"

Specialist Services

The lack of specialist care also indicated a lowering in the levels of quality as one respondent explained:

> *"ZCCM provided specialist care. We had a dentist when you have a problem…we even had an eye ward. There was even a doctor who specialised in bones which was important in case of injury underground."*

The impact of the withdrawal of these services was well expressed by one respondent:

> *"All these facilities have been taken away from us…we have to seek these services from private facilities which are too expensive. Alternatively we have to travel out of town."*

One mother expressed disappointment at the unavailability of an optician in Luanshya:

> *"My son hit himself in the eye in September 2006. When we went to Luanshya Mine Hospital, we were referred to the eye ward in Kitwe. In Kitwe, he couldn't be treated and we were referred to Lusaka. It took my son one year and six months to receive adequate care as we were constantly being sent around."*

Preventive health

The non-involvement of LCM in preventive health care programmes suggests a change in the quality of care. Before privatisation, ZCCM provided preventive health care services for pests and animal control as one respondent described:

> *"Our houses were sprayed for mosquitoes, cockroaches…even ants died because the medicine was so effective. We were also*

not allowed to keep livestock in our premises...except for dogs, which were vaccinated. Now, things have changed. LCM malaria medicine is ineffective. When they spray for the cockroaches, they return after a month."

Another respondent added:

"We are now living side by side with goats and pigs…we live like animals and we are susceptible to diseases such as jiggers."

4.4 INTERVIEW 1: THE DISTRICT DIRECTOR OF HEALTH

The findings are based on the interview held with the District Director of Health, Dr Mulenga. The findings provide an overview of health care in the district. This is important, as it will help understand household perceptions towards the changes of quality in health care in Luanshya Mine owned facilities. It will also assist in understanding ways adopted by households due to the decline in quality.

Overview of health care in the district

According to the District Director of Health, Dr Mulenga, the Luanshya District Health Office is the coordinator of all health issues in the district. In explaining the main duties of his office, he added:

"The main duties are to supervise all health provision within the district with the exception of secondary level hospitals which fall directly under the Ministry of Health. Facilities under this office are Government as well as private."

In Luanshya district, there are fourteen facilities, which include one first level hospital and thirteen health centres operating under the supervision of the Director of Health. Services offered to a population of 180,593 are preventive, curative and rehabilitative health. These services are offered at three levels.

The three levels of intervention are at community (through community volunteers), health centre and hospital levels. Because the community volunteer's involvement is restricted to education and sensitization, the first level of contact for the sick is through the health centres. Patients who require further management are referred to the first level hospitals. A number of factors determine the cost of health at government facilities.

According to Dr Mulenga, children under five years, the elderly above sixty-five years, those who are certified as vulnerable[7] by the department of social welfare and the rural population have free access to health. The rest of population has to pay for registration, consultation and medication.

The average registration at health centres is US $ 0.25 while consultation with the doctor costs about US $ 5. Extra costs of health are from medication. The cost of medication is dependent on the availability and types of drugs required.

Common drugs for malaria, sexually transmitted diseases and antiretroviral (ARV's) and diarrhoea are readily available and are, therefore, dispensed at no cost. Drugs for other ailments are not readily available and have a slightly higher cost, which range from US $ 0.20 to US $ 20. Drugs in the district are 100 per cent available, but the district has staff problems.

The current staffing levels meet only 50 per cent of the required establishment with each trained staff seeing up to 23 patients a day. Dr Mulenga attributes this to pull factors in migration such as nurses migrating to the UK and Australia. Despite the challenges, the District has recorded improvements in its key health indicators.

Since 2006, malaria cases within the District have dropped. According to Dr Mulenga, reported malaria cases have drastically declined from 23,000 in 2006,

[7] The Ministry of Community Development and Social Welfare has a criterion to identify the vulnerable in Zambia through their ability to pay. This includes the disabled, orphans and chronically ill.

18,000 in 2007 and 6,000[8] in 2008. He attributed the high levels in 2006 to the flooding that resulted from the heavy rains.

Health care and privatisation

According to Dr Mulenga, privatising ZCCM had its advantages and demerits. The main advantage as described by Dr Mulenga is that quality in health care provided has improved because government and mine facilities have standardized their operations as per the excerpt below:

> *"Under ZCCM, the mines were willing to spend high sums of money on health. Using TB medication as an example, the Company bought and dispensed medication that was not in conformity with the National standards. They bought medicine from USA because they could afford it. As such, T.B in the country was being treated using two types of medication; the governments and ZCCM. But now, we have standardized our medicines. It has become easier for us to treat T.B."*

A second advantage is that since privatisation, the District Health Office has made use of the mine health facilities to maintain the high quality of health care as explained:

> *In addition, we have access to mine facilities. For example, we use their laboratory. We take our samples there for quality control."*

[8] As at August 2008

A third advantage is that the District Health Office is now able to see more people due to the additional facilities received at privatisation from the mines as explained below:

> *"At privatisation, we were handed three health centres and one hospital. We can now reach out to more people."*

In spite of the advantages, privatisation of ZCCM resulted in demerits. Some of the negative changes were recorded at the time of privatisation such as increase in malnutrition related illnesses and HIV/AIDS related infections. The initial increase in malnutrition related illnesses is explained:

> *"There was a crisis in our health centres as well as the hospitals. There was an increase in malnutrition because most of the miners were no longer in employment as a result of mass redundancies."*

Another demerit was that retrenched miners were reluctant to visit government health facilities due to perceived lower standards reflected in the poor quality of health care. Dr Mulenga detailed this in the excerpt below:

> *"People were reluctant to visit government facilities due to the perceived lower standards. As a result, they resorted to self-medication. This led to the proliferation of illegal drug stores."*

4.5 INTERVIEW 2: MANAGER HUMAN RESOURCES

The information below is based on the interview conducted with the Manager Human Resource Mr. Fred Chola and the Assistant Human Resource Officer Mr. Loti Chola. The interview provided insight into quality in health care at mine facilities before and after privatisation of ZCCM.

The interviewees perceived no changes of quality in health care. According to Mr. Fred Chola:

> *"There haven't been any changes in the quality of care since privatisation. The mine facilities are the same as they were under ZCCM. Some of the changes are justified for example; we couldn't maintain all seven facilities because our target population declined from 4,000 to just under 2,000. It made no sense to run all these facilities as such we handed them over to government."*

In addition to this, Mr. Loti Chola stated:

> *"We still have the best health facilities in the district. In fact, unlike ZCCM, we have extended them to the rest of the public on a fee-paying basis."*

Quality as defined by the Manager Human Resource and the Assistant Human Resource Officer will be addressed by the following themes: adequacy of facilities, extension of facilities to non-miners, adequacy of staff, availability of specialist and preventive health.

Adequacy of facilities

According to Mr. Fred Chola, ZCCM operated two hospitals and five health centres. In describing the facilities that ZCCM operated, he stated that:

> *"Luanshya division of ZCCM …used to run two hospitals. Luanshya mine hospital which was fee paying and Roan mine hospital. There were also clinics…we used to run five clinics. Number 73 Independence clinic in town, section 5 and Fisansa clinic in Roan Township; and section 21 and 22 clinics in Mpatamato Township."*

The health centres provided basic medical services especially for children and pregnant women. As such, under five clinics and prenatal clinics were run on selected days. After privatisation, LCM retained one hospital, Luanshya mine hospital; clinic 5 and number 73 Independence clinics. Roan mine hospital and Fisansa clinic were handed over to government. At the time of the interview, clinics 21 and 22 in Mpatamato Township were in the process of being handed over to the government.

When the facilities were handed over, they were handed over with the accompanying equipment. An example was given of Roan mine hospital which at the time of the privatisation of ZCCM had just constructed an Intensive Care Unit (ICU). Mr. Loti Chola explained:

> *"The hospital was thus handed over with a newly constructed ICU and equipment to provide top quality of care to patients."*

It seems that quality in health care has been maintained because LCM has enough health facilities to cater for its target population as explained by Mr. Fred Chola:

> *"Understandably, a decision was made to hand over the rest of the facilities as the number of employees reduced from 4000 to 1750.We are able reach our population with these facilities. Actually if you go to clinics after 10:00 hrs we hardly have any patients…meaning we adequately cover them."*

Extension of facilities to non-miners

According to Mr. Fred Chola, prior to privatisation, the health facilities were officially open only to employees with the exception of Luanshya mine hospital, which was a fee-paying hospital. Mr. Loti Chola explained:

"*A miner and registered dependents were allowed to access health care from the facilities for free. The non-mining population was allowed to access facilities at Luanshya mine hospital on a fee-paying basis. The age limit for dependents was 21 years after which it was assumed that the dependents had left the house to live on their own."*

Now the facilities are open to non-miners. It seems the extension of these services to non-miners will afford them access to quality care. On describing the conditions of access now, he stated:

"The conditions are still the same for the miners. Non-miners are also now welcome to access our renowned facilities on a fee-paying basis."

Adequacy of staff

Mr. Fred Chola explained that the total staff at all LCM health facilities is thirty-seven. The staff is responsible for the one first level hospital and two health centres. Of the thirty-seven, three are doctors and thirty-four are nurses. On explaining the adequacy of the staff, he claimed:

"The facilities are well staffed. Remember that the staffing was restructured in response to the number of people seen. As far as we are concerned, it's adequate."

Availability of specialist care

Both interviewees agreed that ZCCM health facilities provided the highest quality of specialist care in the country. Specialist care was divided among the seven divisions that were owned by the Company:

"You see, under ZCCM, we used to have specialists to deal with various ailments. I remember we had a specialist who dealt with

bones, an orthopaedic surgeon…he was based here at Luanshya Division. Then we had another one who was specialized in something else at Mufulira Division at Malcolm Watson mine hospital and in Kitwe at Nkana mine hospital there was another specialist…specialising in something else. This applied to all ZCCM divisions."

Privatisation of ZCCM resulted in the autonomy of the various divisions. As such, it was difficult to harmonize the various specialist services as it were under ZCCM. The only specialist service that LCM provides is a surgeon. At the time of the interview, LCM had plans to expand specialist services at Luanshya mine hospital as expressed:

"We as Luanshya Copper Mines are trying to recruit as many specialists as we can accommodate and as much as our facilities can handle because certain specialists can only work where you have the right equipment".

Preventive health care

The indoor residual spraying campaign was one of the community programmes that ZCCM was involved in. According to Mr. Loti Chola:

"ZCCM sprayed malaria medication in all houses within Luanshya."

At privatisation, the responsibility of malaria control programme shifted to government, through the District health office. However, LCM remained actively involved in the programme as well as in the HIV/AIDS programme as explained:

"The Company still conducts indoor residual spraying of homes in former mine townships and clearing of all streams around Luanshya of malaria parasites. Apart from the malaria

programme, we also have a workplace HIV/AIDS programme. Services under this include psycho-social counsellors, peer education and condom distribution".

4.6 SUMMARY

The chapter provided an overview of Luanshya town as well as the changes in ownership of Luanshya Mine since privatisation. Focus group discussions with households were addressed in three parts. Firstly, the demographic characteristics of respondents were presented. Secondly, household's definitions of privatisation were discussed. The common themes used to define privatisation in Luanshya are; loss of social services/amenities, loss of jobs, insufficient pensions, and increase in prostitution. Lastly, households identified dimensions of health, which signify a decline in quality. These included: cleanliness of facilities, availability of ambulances, travel distances, cost of care, staffing levels, staff attitudes, drug availability, waiting times, patient diagnosis, patient satisfaction with treatment, availability of specialist services and preventive health care programmes.

In-depth interviews with the District Director of Health highlighted the state of health delivery as well as the impacts of privatisation on health care in Luanshya. According to Dr Mulenga, there are thirteen health centres and one first level hospital in the district. The health facilities cater for a population of 180,593 and offer preventive, curative, and rehabilitative health at three levels of intervention, which are community, health centre, and first level hospital. Health is free for only the under five year olds, the elderly above sixty-five and the vulnerable. Drugs are readily available while staffing is a problem. In discussing the impacts of privatisation, he said that advantages are that government facilities and mine facilities have standardized operations, there is increased reach and more people have access to mine facilities. Disadvantages are that privatisation led to an increase in malnutrition related illnesses and HIV/AIDS.

The in-depth interview with Human Resource personnel at LCM seems to indicate no change in quality. According to the interviewees the adequacy of facilities, extension of facilities to non-miners, adequacy of staff, availability of specialist and preventive health have maintained the quality in health care**.** A discussion of these findings is detailed in the next chapter.

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 INTRODUCTION

The data gathered for the research provided households perceptions and experiences into changes of quality in health care provided by the mines before and after privatisation. Data collection methods included focus group discussions with households; in-depth interviews with the District Director of Health for Luanshya and Manager Human Resources at LCM as well as document analysis of publications relevant to the study.

Two sections comprise this chapter. Firstly, changes in the quality of health care in mine facilities as perceived and experienced by households because of privatisation of Luanshya are critically discussed; Secondly, household responses in accessing health care after privatisation are provided.

5.2 CHANGES OF QUALITY IN HEALTH CARE

This study has shown that quality in health care at mine health facilities in Luanshya has declined as perceived and experienced by households. Twelve areas of concern identified by households were cleanliness of facilities; availability of ambulances; travel distances; cost of care; staffing levels; staff attitudes; drug availability; waiting times; patient diagnosis; availability of specialist services; availability of preventive health care and patient satisfaction with outcome.

When conceptualised into Donabedian's framework, the twelve dimensions of quality identified by this study can easily be categorised into structure, process and outcome. Based on this, six indicators address structure, five processes and one outcome as shown in Figure 5.1. However, as discussed in section 2.4, the assumed connection between structure-process-outcomes and who defines quality are major points of contention in the definition of quality.

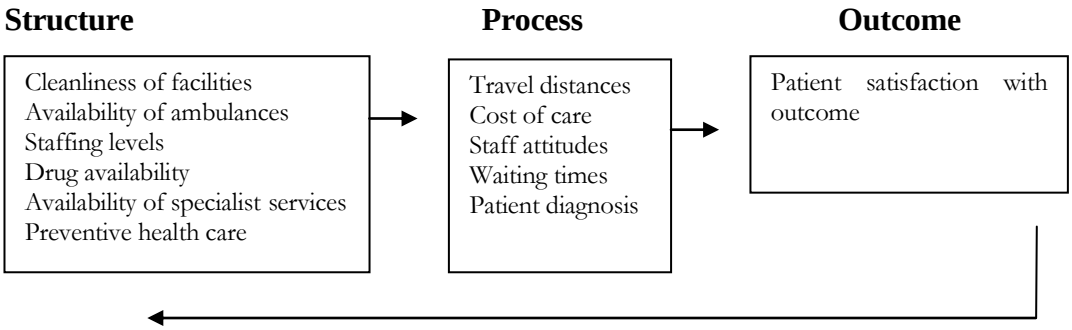


Figure 5.1: Conceptualisation of household dimensions of quality

Firstly, criticism is levelled against Donabedian's framework, which assumes a link between structure, process and outcomes in defining quality in health care (Veney et al. 1993). This study shows a weak relationship between structure, process and outcome of care.

Peabody et al. (2004) note that although the link between structure and better health outcomes is not apparent, there are exceptions to the rule. An improvement in structure leads to better health outcomes in poor settings, which results to improved health of a population.

Whether the setting for the study constitutes a poor one is debatable. Yes, privatisation has affected household incomes. Due to privatisation, health care is competing with household issues such as school fees for children, food and utility bills (water and electricity). It is difficult to establish whether this qualifies as a poor setting as seen by Peabody et al (2004). However, this study suggests that improvements in any of the structural measures could lead to improved health.

For example, an improvement in drug availability and staffing levels, would lead to better health outcomes. Households identified patient satisfaction as their desired outcome from the health seeking process. It is, therefore, safe to assume that cleaner facilities would increase their satisfaction with health care. However, satisfaction is difficult to define as an outcome indicator of quality in health care.

As an indicator of quality, outcomes are normally very difficult to measure (Donabedian 2005). For this study in particular, patient satisfaction is difficult to ascertain. What constitutes patient satisfaction differed with individuals. For example, some defined patient satisfaction as getting the correct diagnosis right the first time. Others talked about the number of days it would take to obtain results of a malaria test. It is, therefore, very difficult to gauge how an improvement to any of the structure indicators could lead to receiving correct diagnosis the first time. Apart from these variations in individual perception, outcomes as measures of quality should be used with caution.

Outcomes are popular especially when quality of health care has a direct bearing on the health outcome. Exceptions where outcomes are not a good measure of quality are when factors such as lifestyle and socio-economic status are a major determinant of health as is the case with cigarette smokers (Mant 2001). The weak link between outcomes and quality of health care makes process measures a popular measure of quality (Bowling 2002; Haddad et al. 1998a).

There is evidence that supports the fact that process measures lead to better health outcomes (Bruce 1990). Process measures such as improved patient diagnostic procedure could result in health care staff getting the problem right the first time. However a reduction in cost of care can lead to the same for instance it is difficult to understand. For instance, a reduction in costs can lead to patient satisfaction however, if there are no measures to improve diagnostic techniques from the health providers for instance, it is hard to see how this can lead to better diagnosis. Although the linkage between processes and outcomes is not obvious, process indicators are easy to measure.

In support with Bruce (1990) and Peabody et al. (2004), process measures identified for the study can easily be obtained through clinical records, administrative data and direct observation. As such, patient information on travel distances, cost of care, staff attitudes, waiting times and patient diagnosis can easily be obtained.

Perhaps a surprising finding is the fact that structure, process and outcome dimensions cannot be given the same weight, which is assumed by Donabedian's framework. If we go by numbers, the study suggests structure measures are the most popular amongst households. However, if we go by the frequency with which certain dimensions are measured, process of care is important.

This finding has major implications for future studies. It is impossible to have a universal definition or measure of quality in health care. Measures of quality are dependent on household expectations from the health seeking process. As such, if this study was replicated in a similar setting, the results may be different.

The argument on the connectivity between the structure, process and outcome indicators of quality in health care has shown that household perceptions are centred on interpersonal relationships, effectiveness of care and accessibility. Households do not attach importance to the clinical aspects of quality. This ushers in the second point of contention in studying quality in health care.

Who defines quality is a source of debate as there is uncertainty as to who best defines it (Peabody et al. 2004). Although this research was set out to explore the changes of quality in health care from the household perspective, official responses were also taken into account. This study showed that the variations in the definition of quality do not only exist between users and providers, but amongst providers themselves as well.

There was consensus amongst households that quality in health care had declined. The decline was attributed mainly to changes in interpersonal relationships, effectiveness of care and accessibility. On the contrary, the Manager Human Resources, and District Director of Health have seen no changes in the quality of health care. If anything, there seems to be an improvement. However, their views on quality were different.

The District Director of Health for example, who is a medical doctor focused on the number of patients attended to, correct clinical procedure and standardisation of operations. On the other hand, the Manager Human Resources was more concerned with coverage of population, adequacy of staff and facilities.

This study, therefore, shows the importance of an integrated view of quality. Coming back to the linkage between process and outcome, an improvement in travel will not necessarily lead to better health outcome. However, if this is coupled with an improvement in diagnostic training from the provider's side, the desired health outcome both clinical and non-clinical can be achieved. Household perceptions into changes in quality have been largely influenced by privatisation. Because of privatisation, household health seeking behaviour has changed. Strategies adopted by households are discussed in the next section.

5.3 STRATEGIES ADOPTED BY HOUSEHOLDS

A good starting point in understanding household strategies is to recognize variables that affect access to health care. The study finds that constraints (e.g., household income, high cost of care and travel costs) as opposed to preferences in the demand for health care (e.g., culture, socio-economic environment and gender attitudes) as identified by O'Donnell (2007) are major determinants.

The constraints, mainly addressing costs, are a direct result of the privatisation of ZCCM. Since privatisation, health is free for mine employees and their registered dependents. However, the cost of accessing care has increased due to changes in household income, high costs of travel and unavailability of drugs.

In terms of changes in household income, there is little disposable income available. Health is no longer a priority in most mining households in Luanshya as there are other competing factors. Residents have additional pressure on their incomes as they have to pay for education, water and electricity bills, from which they were

previously exempted. As such, health care has rather become a luxury. The closure of some health facilities has also increased the cost of travel.

At privatisation, one hospital and three health centres were closed and handed over to the government. This has increased travelling distances to health facilities. For instance, Mpatamato residents, travel between 5 to 10 kilometres to the nearest health facility. This has translated in high cost of travel. According to O'Donnell (2007), increasing costs of health care without an increase in quality deters people from accessing health care.

According to Hjortsberg and Mwikisa (2002) a combination of low incomes and poor quality, diminishes household demand for health care. Health care for most households has become a luxury. Households revealed that they only seek care when it is absolutely necessary. They have instead adopted coping strategies in their access to health care. These strategies vary between those that incur high costs and low costs. These costs depend on the cost of travel, distance covered and cost of drugs.

Households who incur high costs in their access to health have reduced utilisation of formal care. As such, households by-pass the mine health system and seek cheaper sources of health from the informal system. Households have resorted to self-medication as a popular strategy by procuring cheap drugs from illegal drug stores for common illnesses such as colds and diarrhoea.

Those that incur less cost in their access to health have maintained their utilisation of mine facilities despite a decline in quality. They do mainly through the sale of vegetables.

5.4 SUMMARY

This study suggests a decline of quality in health care provided by mine facilities in Luanshya. The decline is with regard to twelve dimensions: cleanliness of facilities;

availability of ambulances; travel distances; cost of care; staffing levels; staff attitudes; drug availability; waiting times; patient diagnosis; availability of specialist services; availability of preventive health care and patient satisfaction with outcome.

Donabedian's framework assumes that an improvement in structure and process could lead to better outcomes. The framework also supposes that structure, process and outcomes of health care have the same weight when defining quality.

This study, however, shows that improvements in structure and process rarely lead to better health outcomes thus weakening the relevance of Donabedian's framework to this study. In addition, the structure, process and outcomes of quality in health care do not have the same weightings as the study shows that households attach high importance to process measures. Also revealed is that measurement of process and outcome has limitations.

Most importantly, the study shows the importance of an integrated view of quality. Households did not attach any importance to clinical elements such as safety, but focused on the non-clinical side such as the cost of travel. However, a balanced view is required.

The study also found that constraints due to household income, high cost of care and travel costs are major determinants of accessing health. The constraints are a direct result of the privatisation of ZCCM. Since privatisation, the cost of accessing health care has increased due to changes in household income and costs of travel. Households have little disposable income available and as a result, health is no longer a priority in most mining households in Luanshya as there are other competing factors. The closure of some health facilities has also increased the cost of travel. Strategies vary between those that incur high costs and low costs.

Households who incur high costs in their access to health have reduced utilisation of formal care. As such, households by-pass the mine health system and seek

cheaper sources of health from the informal system. Those that incur low costs in their access to health have maintained their access to mine facilities despite a decline in quality.

CHAPTER 6: PROPOSED BLUEPRINT FOR CONCEPTUALISING QUALITY IN HEALTH CARE IN ZAMBIA

6.1 INTRODUCTION

This chapter proposes a blueprint for conceptualising quality in health care. The proposed blueprint is as a result of:

1. Limitations in Donabedian's framework as discussed in Chapter 2, and ;
2. The findings of the study as presented and discussed in Chapters 4 and 5, respectively.

6.2 PROPOSED BLUEPRINT

The discussion of the findings in Chapter 5 revealed limitations in the conceptualisation of quality in health care. The limitations are demonstrated by a critique of Donabedian's framework and the data from the focus group discussions.

Donabedian's framework on quality in health care does not refer to influencing factors. Focus group discussions show that quality is largely influenced by households' access to health care. As such, households revealed incomes and travel costs as major determinants of quality in health care.

In view of the above and the lack of a known framework to define quality in Zambia, this section, therefore, proposes a blueprint to conceptualise quality in health care. The proposed blueprint recognises that access to health care is a key determinant of quality.

Access to health care is influenced by macro social and economic as identified by Peabody et al. (2004) and represented in Figure 6.1.

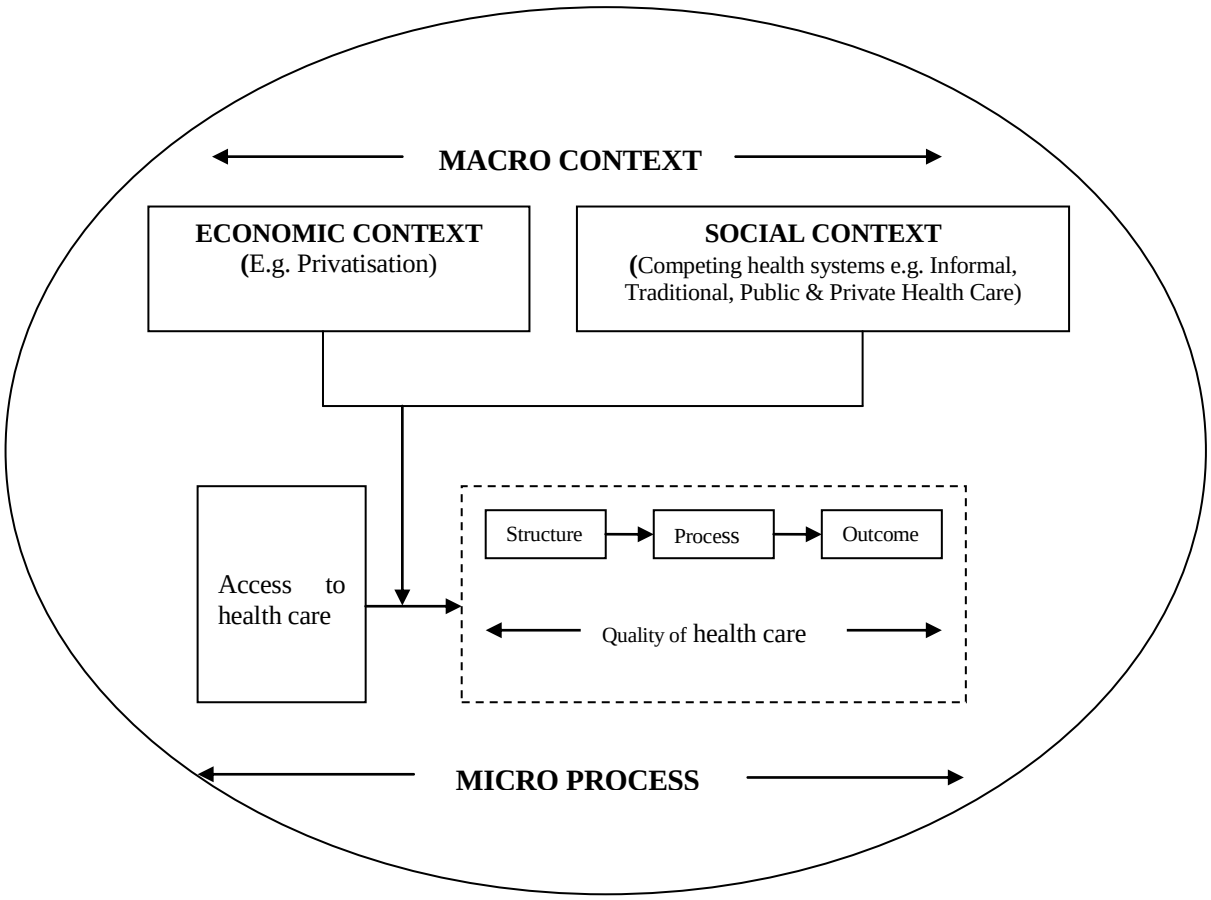


Figure 6.1: Proposed blueprint to conceptualise quality in health care

In Figure 6.1, the dashed rectangle inside the oval shape is a construction of Donabedian's quality of care framework represented by the words "structure, process and outcome" as explained in Chapter 2. To the immediate left of the quality of care process is the household's access to health care. Both rectangles represent the micro process within which quality of health care is defined. The micro process is the health seeking process resulting in the interaction between households and health care workers.

The blueprint further shows that access to health care is determined by two macro contexts as shown in the upper left and right rectangles. The upper left rectangle, the economic context, shows that privatisation has affected household access to health care. The economic context is important as, since privatisation, household

incomes and cost of travel have affected access to health care. Households have little disposable income available due to other competing factors such as water and electricity bills, which previously were provided at no cost. As a result, they spend less on health. In addition, privatisation led to the closure of one hospital and three health centres, which has increased the cost of travel for some households. Privatisation has, therefore, influenced household's views of quality in health care

The upper right rectangle, the social context, shows that competing, non-mine health systems have also affected household access to health care. Households disclosed that those that incur high costs in their access to health have reduced visits to mine facilities. As such, these households by-pass the mine health system in search of cheaper sources from other health systems system. Most common is the informal sector, which consists of cheap drugs. As such, households have resorted to self-medication. The services provided by other health systems have, therefore, affected household's perceptions of quality in mine facilities.

To surmise, the proposed blueprint to conceptualise quality in health care shows that households perceptions of quality are not limited to the micro process. Instead, economic and social factors also affect access to health care and the quality thereof. For this study, the macroeconomic and macro social contexts have played a big role in shaping people's perceptions.

However, this framework is not universal. It only represents the views of households in Luanshya based on their perceptions and experiences. If replicated in a different setting the results may be different. These results though have implications for policy makers and health providers in Zambia as discussed in chapter 7.

6.3 SUMMARY

This chapter proposed a blueprint for conceptualising quality in health care in the Zambia, and Luanshya in particular. The proposed blueprint is a result of the

limitations in Donabedian's framework as well as evidence from the study. The framework recognises that access to health care plays a role in shaping households' perceptions of quality. In view of this, the blueprint identified macroeconomic and macro social contexts which affect access to health care. Regarding the economic context, privatisation has affected household incomes and the cost of travel, thus influencing household's views of quality in health care. On the macro social context, services provided by other health systems have also influenced household's perceptions of care. Based on the proposed blueprint, the next chapter provides the conclusions to this research report.

CHAPTER 7: CONCLUSION

7.1 INTRODUCTION

Four sections comprise this chapter; firstly, a conclusion of the research is discussed; secondly, implications of the findings are presented; thirdly, limitations of the research are considered and lastly; recommendations for future works are provided.

7.2 CONCLUSION

This study explored changes of quality in health care in mine facilities as perceived and experienced by households' pre and post privatisation of ZCCM. In so doing household responses in accessing health care services after privatisation were also explored. Due to the limitations in conceptualising quality in health care using Donabedian's framework and data from focus group discussions, a blueprint for conceptualising quality in health care within Zambia was proposed.

The study suggests a decline in the quality of health care provided by mine facilities in Luanshya as indicated by households. The decline is with regard to twelve dimensions: cleanliness at facilities; unavailability of ambulances; increased travel distances; increased cost of care; low staffing levels; poor staff attitudes; unavailability of drugs; long waiting times; inadequate patient diagnosis; unavailability of specialist services; lack of preventive health care and dissatisfaction with treatment procedure.

The study concludes that health systems do not exist in closed environments as suggested by Donabedian's framework. Instead, health systems interact with micro and macro processes as shown in chapter 6. As the study reveals, the perceived decline in the quality of health care in Luanshya mine facilities is due to factors

such as changes in household incomes and high costs of travel to health care facilities.

Although Donabedian's framework is widely used in exploring quality in health care, the contexts in which these studies are undertaken are important. As such, underlying social, economic and political factors should be taken into account in-order to understand people's perceptions and experiences. In addition, a balanced perspective is required.

The study confirmed that differences in perception exist between health care providers and users. This conclusion is drawn from the fact that although there were similarities in the dimensions of quality raised, perceptions differed. Whereas households have seen a decline in the quality of health care, the Manager Human Resources at LCM, and the District Director of Health for Luanshya suggest an improvement.

Interestingly, the in-depth interview with Manager Human Resource indicates that changes in health care seen were with regard to quantity, which was justified by the number of employees. At privatisation, there were mass retrenchments, which corresponded with the reduction in the medical staff and facilities.

In a study where privatisation has led to mass unemployment and withdrawal of social services, a balanced view is even more important. Household's emotions are still running high, as they feel cheated by the government and the new investors. Their perceptions will tend to be somewhat speculative and largely based on expectations not experiences. Caution should, therefore, be exercised in understanding certain claims. Based on this, it is important to have a balanced view in order to validate information due to causal reasons.

7.3 IMPLICATIONS OF THE STUDY

In view of the above findings, privatisation of ZCCM changed the relationship between communities and the mines. Since the early 1900's when mining first started on the Copperbelt province, the industry was responsible for all aspects of life on the communities. The question remains whether enough consideration was given to the withdrawal of these services at privatisation.

Development Agreements (DA's) between the Government of the Republic of Zambia and the imminent mine owners would give details into such claims. These documents are highly secretive. Therefore, it is uncertain to assess whether the changes in services are due to inadequacies by the new mine owners or lack of consideration by the Government.

However, perceptions in former mining towns towards new mine owners should change. As much as the new companies have a responsibility to the communities, their core business is mining. They have a responsibility also towards their shareholders. However, the Government also needs to hold the new miners accountable to ensure that they are operating within the stipulations of the DA's. With health in particular, new mine owners should not compromise quality at the expense of quantity.

Following household concerns, mine owners should address these issues if they are to provide quality care. Important issues such as staff attitudes and inadequate diagnosis can be addressed by adequate training and in some cases re-training of personnel.

The study also reveals major implications for future studies on households' views in quality in health care. Household views should not be read in isolation, but with regard to the context in which the study is undertaken.

7.4 LIMITATIONS OF THE STUDY

Certain limitations about the study design were discovered during the course of the research. The most significant were:

i. Due to limited resources, time constraints and that it is an academic report, the sample size was small. A larger study sample would have been preferable to improve generalization of the findings.
ii. The chosen method of recruiting participants for focus group discussions was possibly biased as most of them were recruited with assistance from nurses and were actively involved in health activities through respective women groups. In addition, participants were informed, prior to the visit, about the impending discussions through participant information sheets. This might have pre-empted the outcome of focus group discussions.
iii. All focus groups were conducted in a local language, Bemba, and not English. The interpretation was, therefore, a challenge as there is no one word to describe quality of health care.
iv. Because the person who conducted the research is a mine employee and has lived on the Copperbelt all her life there may be an element of biasness in terms of the way discussions were led.
v. An interview with the Chief Medical Officer responsible for health facilities at LCM would have given a more clinical response towards the changes of quality in health care. Information such as the actual drug availability and number of ambulances at health institutions

7.5 FUTURE RESEARCH TOPICS

Following this study, recommended future works are proposed based on the limitations and the need to test the reliability and validity of this research. Three future research works are, therefore, proposed.

In order to test the reliability and validity of this research, the proposed blueprint to conceptualise quality in health care at mine facilities should be tested in similar settings. As such, a study can be undertaken in other former ZCCM towns apart from Luanshya.

It is also proposed that future works recognise health as a competing factor in households. This study has revealed that households have other priorities apart from health. It should, therefore, be interesting to test the differences in perceptions if health was competing against other household factors such as education or food.

Finally, a representative sample is required to give a gender-balanced view. This study was largely represented by women. Empirical evidence shows that women are more sensitive to inter-personal issues while men are more sensitive to issues of finance.

7.6 SUMMARY

The study concludes that health systems do not exist in closed environments as suggested by Donabedian's framework. Instead, health systems interact with micro and macro processes as shown in chapter 6. As such, underlying social, economic, and even political and cultural factors should be taken into account when understanding people's perceptions.

The study also confirmed that differences in perception exist between health care providers and users. This presents a major point of the need to include both the users and the providers' perspectives in studies.

The study also provides suggestions for future studies on households' views towards quality in health care. Household views should not be read in isolation, but with regard to the context in which the study is undertaken. These contexts could be political, economic, social and even cultural. The onus remains on mine owners to address some of the issues arising from focus group discussions. For example,

issues such as staff attitudes can easily be addressed by training of personnel in communications skills.

There were five main limitations of the study. Firstly, the sample size was small due to limited resources, time constraints and the fact that this is an academic report. Secondly, there was biasness with the way participants were recruited. Most of them were recruited with assistance from nurses and have actively been involved in health activities through respective women groups. Because participants were informed, prior to the visit, about the impending discussions through participant information sheets some of the outcomes from focus group discussions were pre-empted. Thirdly, since focus group discussions were conducted in a local language, Bemba, there was a likelihood of losing meaning, as there is no one word to describe quality in health care. Fourthly, there might have been biasness with the way discussions were led as the research was conducted by a mine employee who has lived on the Copperbelt all her life. Fifthly, a clinical response on changes of quality in health would have given a balanced view of the research.

Recommendations based on the limitations and the need to test the reliability and validity of this research have been made for future studies. In order to test the reliability and validity of this research it was proposed that the blueprint framework be tested in other former ZCCM towns apart from Luanshya. Regarding future study areas, it was proposed that research recognise health as a competing factor in households. Finally, a representative sample is required for future research in order to give a gender-balanced view as this study was largely represented by women.

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APPENDIX I

FOCUS GROUP DISCUSSIONS

Demographic Information

Name (optional)……..

Age…….

Sex……..

Level of education……..

Job Title (if applicable)……...

Livelihood activities……

1. So we will start with a definition of privatisation. How do we understand privatisation in Luanshya with reference to the privatisation of Zambia Consolidated Copper Mines (ZCCM)?

   Probes: Changes in working conditions change in service delivery, job losses.

2. Could you explain how health care was under ZCCM?

   Probes: Number and names of facilities, services offered, payment, eligibility.

3. Were you happy with facilities under ZCCM?

4. Tell me more about what happened to facilities at privatisation?

   Probes: Closure.

5. What do you understand by quality of health care?

6. How do you think quality in health has changed since privatisation of ZCCM?

   Probes: Access, costs, eligibility, availability of drugs,

   Probes: Payment? Eligibility?

IN- DEPTH INTERVIEW SCHEDULE

Mine Management

1. What were the main contents of ZCCM health policy concerning Luanshya Division?
2. How would you rate the quality of health care provided by ZCCM?
3. What is LCM stance on health care after privatisation?
4. What kind of services do you provide?
5. What are the conditions of access?
6. What population are you currently serving?
7. What is the staffing like?
8. Do you provide any specialist and preventive care?
9. In your opinion, how has privatisation affected the quality of health care/

District Health Office

1. What are the duties and functions of the District Health Office?
2. Do you oversee the private sector as well or it restricted to government?
3. How many employees are currently working for the District Health Office?
4. Would you kindly give me a breakdown of these employees?
5. What is the patient/doctor, nurse/doctor ratio?
6. How many health facilities are in Luanshya?
7. What is your catchment population?
8. Kindly expand on the types of services offered?

9. How effective has your intervention been at community level?
10. And in other areas of intervention, how are you fairing?
11. On average, how many patients do you attend to in a year?
12. What are the conditions of access to your facilities?
13. Does the district provide any preventive care?
14. What are the major challenges faced by the district?
15. How has privatisation affected your activities?
16. As a department, did you foresee some of these problems and put in some mitigating measures?
17. Have you maintained quality at these facilities?
18. What is the nature of your partnership with ZCCM and then LCM?
19. In your opinion, has privatisation of ZCCM affected the quality of health care?

APPENDIX II

Date:…../……./2008



PARTICIPANT INFORMATION SHEET (IN-DEPTH INTERVIEWS)

My name is Angela Tembo and I am conducting research for the purpose of obtaining a Masters Degree in Development Studies at the University of the Witwatersrand.

The purpose of my study is to explore the changes of quality in health care after privatisation of ZCCM. The research is important for the success and better planning of future privatisations to be undertaken in Zambia.

To be able to do this we I would be grateful if you could allow me to interview you. The interview will last for approximately an hour and thirty minutes and will be tape-recorded. Your participation in this exercise is strictly voluntary and confidential. I will keep personal information about you confidential and will use the information for analysis only. You have the right to withdraw at any time, if you are not satisfied with the process. Please note that there are no ethical implications or risks attached to your participation.

I will be in touch within a week in order to discuss you participation and arrange for the interview. If you have any questions concerning the interview, or any inquiry, please do not hesitate to contact me on 0977792400.

The research will contribute to understanding the social implications of privatisation, as well as contribute to policies on privatisation.

Thank you very much for your help.

Kind Regards

Angela Tembo

APPENDIX II



Date:…../……./2008

PARTICIPANT INFORMATION SHEET (FOCUS GROUP DISCUSSIONS)

My name is Angela Tembo and I am conducting research for the purpose of obtaining a Masters Degree in Development Studies at the University of the Witwatersrand.

The purpose of my study is to explore the changes of quality in health care after privatisation of ZCCM. The research is important for the success and better planning of future privatisations to be undertaken in Zambia.

If you have accessed both ZCCM and Luanshya Copper Mines Plc health facilities, I would be grateful if you could be part of the focus group discussion interview. The discussions will last for approximately and hour and thirty minutes. Your participation in this exercise is voluntary and confidential. There are no risks to you. I will keep personal information about you confidential and will use the information for analysis only. Your name will not appear in any report and no reports will allow anyone to relate results to you. You have the right to continue with the discussions and you can withdraw at any time, if you are not satisfied. Please note that there are no ethical implications or risks attached to your participation.

I will be in touch in a week in order to discuss you participation and arrange for the interview. If you have any questions concerning the interview, or any inquiry, please do not hesitate to contact me on 0977792400.

The research will contribute to understanding the social implications of privatisation, as well as contribute to policies on privatisation.

Thank you very much for your help.

Kind Regards

Angela Tembo

APPENDIX III



INFORMED CONSENT FORM

I consent to being interviewed by Angela Tembo for her study on exploring the changes in quality care after privatisation of ZCCM. I am fully aware that:

- Participation is voluntary and confidential
- The interview will be tape recorded
- I may withdraw from the interview at any time
- My responses will remain confidential
- No information will be tied to me
- All information presented will be used for analysis only

Name:…….

Date:……

Signature:…….

APPENDIX III



INFORMED CONSENT FORM

I consent to being part of the focus group discussions by Angela Tembo for her study on exploring the changes in quality care after privatisation of ZCCM. I am fully aware that:

- Participation is voluntary and confidential
- The discussions will be tape recorded
- I may withdraw from the discussions at any time
- My responses will remain confidential
- No information will be tied to me
- All information presented will be used for analysis only

Name:…….

Date:……

Signature:…….

APPENDIX IV



CONSENT FORM FOR TAPE RECORDING FOCUS GROUP DISCUSSIONS

I hereby consent to the tape-recording of the focus group discussions. I understand that all information will be kept confidential. I also understand that the tapes will only be processed by the researcher. The tapes will be kept safe and will be destroyed after two years of publishing the report.

Name:…….

Date:……

Signature:…….

APPENDIX IV



CONSENT FORM FOR TAPE RECORDING INTERVIEWS

I hereby consent to the tape-recording of the interview. I understand that all information will be kept confidential. I also understand that the tapes will only be processed by the researcher. The tapes will be kept safe and will be destroyed after two years of publishing the report.

Name:…….

Date:……

Signature:…….