DISTRICT HEALTH BOARDS AND REFERRAL HOSPITALS IN ZAMBIA: AN ECONOMIC ANALYSIS OF CONTRACTING

THESIS SUBMITTED TO THE UNIVERSITY OF LONDON FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

JOLLY KAMWANGA

HEALTH POLICY UNIT, DEPARTMENT OF PUBLIC HEALTH AND POLICY,
LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE.

September 2006

ABSTRACT

Zambia adopted the policy of internal contracts, as part of the broader health sector reforms. Drawing on insights from New Institutional Economics, this study investigated the policy of internal contracts between District Health and Referral Hospital Boards. The objectives of the study were: to describe the nature of contracts between districts and hospitals; assess the impact of different types of contract settings on referrals; and explore the processes through which contracts impacted on referrals. The study used a combination of qualitative and quantitative methods.

The study found that internal contracts had produced positive outcomes such as the delineation of service provision functions among providers, devolution of authority to devolved units, and increased interaction between districts and hospitals. These outcomes were, however, marred by a narrow decision making space, which was characterized by staff inadequacies and management difficulties and service delivery constraints. The juxtaposition of autonomous district and hospital units with hierarchies further limited the effectiveness of internal contracts.

The study showed that referral inappropriateness was a pervasive problem and there were significant differences between public and NGO contracts. Both the districts and hospitals faced a combination of incentive structures which impacted on referrals. The contract payment method resulted in the district and hospitals' urge to maximise referrals and minimise referral care respectivley. The providers were more likely to respond to social than organisational incentives. Among NGO providers, the social incentives were more pervasive, the likelihood of congruence between provider and managerial objectives was higher, and there was a high level of social deprivation and low quality public health services, which generated referral pressures. The weak/lack of effective rewards and penalties perpertuated referral difficulties.

The New Institutional Economics framework was helpful in understanding the difficulties of contracts by identifying the influence of incentive structures on referrals. The study recommended that: internal contracts could be more effective with the expansion of autonomy, improvement of service delivery capacity, and adoption of effective rewards and penalties. In order to monitor and improve the operation of contracts, the information system ought to capture referral data.

DEDICATION

To Gertrude, Muzala, Milimo, Jolly Jnr, and Waana for the patience and tacit cajoling along the way.

TABLE OF CONTENTS

List of tables

List of figures

Glossary

ARI	Acute respiratory infection
ALRI	Acute lower respiratory infection
ANC	Antenatal care
ANOVA	Analysis of variance
ARC	AIDS related complex
ARV	Anti Retro Viral
BP	Blood pressure
CBOH	Central board of health
CHW	Community health worker
Dfid	Department for international development
CH	Central hospital
DALYS	Disability adjusted life years
DHB	District health board
DHIT	District health implementation team
DHMB	District health management board
DOTS	Daily observed treatment system
DRC	Democratic Republic of Congo
DRG	Diagnosis related group
EDMSS	Essential drugs and medical supplies services
FP	Family planning
GI	Gastro infections
GP	General practitioner
HAHC	Hospital affiliated health centre
Hb	Haemoglobin
HBC	Home based care
HC	Health centre
HE	Health education
HEPS	High energy and protein supplement
HIPC	Highly indebted poor country initiative
HP	Health Post
HRIT	Health reforms implementation team
ICU	Intensive care unit
IEC	Information, education and communication
KANDO	Kitwe, Arthur Davison, Ndola
KCH	Kitwe central hospital
LMIC	Low and middle income country
MD	Medical doctor
MMD	Movement for Multiparty Democracy
MMH	Monze mission hospital
MOH	Ministry of health
NCH	Ndola central hospital
NGO	Non governmental organisation

NIE	New Institutional Economics
NPM	New public management
OPD	Out patient department
ORS	Oral rehydration solution
PMO	Provincial medical office
PLWHA	People Living with HIV/AIDS
PRSP	Poverty reduction strategy paper
RHB	Referral hospital board
PHC	Primary health care
RTI	Respiratory track infection
SI	Severity index
STI	Sexually transmitted infection
STD	Sexually transmitted disease
TT	Tetanus toxoid
UNIP	United National Independence Party
UNSRISD	United Nations Research Institute for Social Development
URTI	Upper respiratory track infection
UK	United Kingdom
UTH	University Teaching Hospital
UNZA	University of Zambia
WHO	World Health Organisation

Selected terminology

Basic Package of Care (BPC): A list of health services and the means by which the population gains access to the services, and for which public funds are used. The package includes services at the first level of contact, first, second, and third referral levels.

By-pass fees: A disincentive fee paid by people who seek services directly from hospitals without being referred by lower level health facilities.

Contracts with NGO/mission hospital: Internal contracts between District Health Boards and NGO/mission hospitals. Hospitals with such contracts are sometimes referred to as NGO hospitals

Contracts with public/government hospitals: Internal contracts between District Health Boards and government hospitals. Hospitals with such contracts are sometimes referred to as public hospitals.

Delinkage of staff: Process of redeploying public service workers from the public service to autonomous district and hospital health boards.

District Health Board (DHB): District level health sector governing unit responsible for overseeing the provision of district health services. The boards are tasked with monitoring and facilitating the delivery of district health services.

District Health Management Board (DHMB): District health service provider unit charged with the provision of district health services.

Downstream contracts: Internal contracts between DHB and Referral Hospital Boards (RHB). They could also denote internal contracts between district/hospital boards and frontline health providers.

Hospital Affiliated Health Centre (HAHC): A health centre, which is located within hospital premises. Following the implementation of health reforms, hospitals were requested to cease providing outpatient department (OPD) services. The HAHCs were established to replace hospital OPDs and were managed by DHBs

Hospital filter clinic: A wing within the hospital, from which patients are screened before being admitted.

Hospital OPD: An outpatient department within hospitals, where outpatients can access hospital services.

Prepayment Scheme: A payment system where health service consumers make advance payments and are not required to pay at the point of accessing health services.

Public Service Commission (PSC): A central Government agency which is responsible for the recruitment of public service workers. Although staff under DHBs and RHBs were supposed to be delinked from the PSC and absorbed in the new boards, this had not happened because of government's inability to meet the accompanying financial costs of retiring staff from the civil service before absorption into boards.

Referral Hospital Board (RHB): Referral hospital governing unit responsible for overseeing the provision of hospital services. The boards are tasked with monitoring and facilitating the delivery of hospital health services.

Referral Hospital Management Board (RHMB): Referral hospital health service provider unit charged with the provision of hospital health services.

Reference Health Centre (RHC): Reference health centres are clinics designed to provide intermediary health services, at a lower level than those provided by referral hospitals, but higher than those provided by health centres. These are established as a means of rationalising the demand for hospital services

Upgraded health facilities: Health facilities which had been rehabilitated in order to improve their capacity to deliver health services. Districts where such upgrading had taken place are sometimes referred to as upgraded districts.

Upstream contract: Internal contracts between the Central Board of Health and DHBs/RHBs.

Acknowledgements

To my supervisor Barbara McPake, I can never thank you enough for being patient with my tentative attempts at making sense of New Institutional Economics. I will never stop marvelling at the detail of your reviews. To members of my supervisory committee for the guidance along the way: Barbara McPake, Charles Hongoro, Hannah-Rose Douglas, Jenny Roberts and Julia Fox-Rushby.

I am indebted to my sponsors, the Commonwealth Scholarship Commission (CSC) for granting me an excellent scholarship to study at a premier institution, the London School of Hygiene and Tropical Medicine (LSHTM). My further thanks go to the British Council office, Zambia, in particular to Ackim Banda and postbhumously to a colleague, Lungowe Mkandawire, whose tragic death, I learnt of while I was away (MHSRP).

I convey my gratitude to my employers, the University of Zambia (UNZA) for not only granting me study leave, but more importantly for proving a safe environment for my family while I was away. My special thanks to the Vice and Deputy Vice Chancellors and Staff Development Office for their encouragement.

My interest in health economics was cultivated from the time I participated in a United Nations Children's Fund (UNICEF) sponsored "Costing and financing of basic health services" project in the middle nineties. The interest was natured through participation in various health economics related projects, ranging from "costing and financing"; "health reforms"; and "provider autonomy". For all these, I would like to record my appreciations to Sally Lake for introducing me to the "thrills" of health economics and to Kara Hanson and Barbara McPake for helping to sustain the zeal.

I have been involved with the Ministry of Health (MOH) for a while and interacted with many officials at various fora. I would like to record my appreciations to everybody I

have worked with. Special thanks are extended to managers/directors and providers of the University Teaching Hospital (UTH), Kitwe, Monze, and Ndola Referral Boards and the District Health Boards for their time and patience.

A PhD programme is a lonely and at times very frustrating experience, especially when one is so far away from home. My friends/colleagues at LSHTM made the burden lighter: James Tibenderana, Julius Filius, Brenda Roche, Eleonor Bachinger, Valeria Cruz-Oliveria, Meenakshi Gautham, Ramon Castano-Yepes, Gregario Sanchez, Reem Al-Torki, Alvaro Alonzo and Pongsadhorn Pokpermdee.

Uncle David and aunt Mildred Grubb and cousins Moyna and Hilary were always so pleasant to visit in Ireland. The support and friendship of Richmond Michelo, Lawrence Mufwinda, Kelly Muvwanga, Frackson Banda, Luka Mshanga, Lee Habasonda, Ian Filakati, Adelade Mtenga, John Shea, and Epafra Anga is much appreciated.

The laborious task of transcribing and entering the data was made lighter with the help of Chisha Muzyamba. To Malukutu, Jethro Kambwili, Mirriam Kateule, BBuku and Angel Malama, thank for your patience in reviewing the inpatient records.

Chapter 1.00: Introductory chapter

1.10: Introduction

This introductory chapter outlines the background to the study, by firstly describing the geographical location of Zambia. This is followed by an overview of the economy, which focuses on the long term economic decline, and the resultant deterioration of social indicators. The impact of the increasing disease burden, especially the effect of HIV/AIDS on the deterioration of social indicators is discussed and the combined impact on poverty highlighted. The consequent policy responses to worsening social indicators, and specifically health-sector reforms are described. The chapter ends with the identification of the research question and outline of the thesis format.

1.20: The geo-political setting

Zambia, which is located in the Southern part of Africa covers an area of 752,614 squared kilometres. Growing at an annual rate of 3 %, the country's population was estimated at 12 million by 2005. Mining is the major economic activity, although since the middle 1990s, the government has targeted agriculture and tourism as sectors whose economic potential has not been fully exploited. The earlier development of the mining industry led to large urban settlements, which resulted in a high level of urbanization, making the country one of the most urbanized in Africa. Zambia shares borders with eight countries: Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, the Democratic Republic of Congo (DRC) and Zimbabwe.

Zambia had been a British colony, until its independency in 1964. At independence, the country was ruled by the United National Independence Party (UNIP), initially under a multiparty democracy (1964-1972), and thereafter under a one-party political regime (1973-1991). Over time, the one-party political regime grew increasingly unpopular and repressive as it faced security and economic difficulties, arising from internal economic factors and external sources of destabilisation during the long liberation was in the neighbouring countries. In the face of economic collapse, domestic unrest and international pressure, the UNIP government reintroduced multi-party politics, which

culminated in the 1991 democratic elections. In the subsequent legislative and presidential elections, a newly formed Movement for Multiparty Democracy (MMD) party secured an overwhelming majority, winning 131 of 150 National Assembly seats. Commentators on the political transition in Zambia have expressed both optimism about the dawn of a new political system and scepticism about the institutional weaknesses for sustaining political pluralism. What is clear, however, is that political pluralism has been entrenched.

1.30: The economy

Zambia was one of most prosperous African nations at independence in 1964, and remained that way for a large part of the sixties and early seventies. However, a combination of external factors such as the middle 1970s Middle East oil crisis and bad internal economic policies such as a rigid economic structure established through high protection, public sector dominance, and import substitution led to a precipitous economic decline that generated a severe economic crisis. Measures were, as a consequence taken to address the inherent weaknesses of the economy through International Monetary Fund (IMF) and World Bank supported economic programs. Although the pre-1991 government adopted IMF/World Bank programs, these were not strictly adhered to and interruptions were common. Beginning 1992, after the political change, a new economic programme was embarked upon, under which comprehensive economic reforms were introduced (Soeters, 1997).

The economic reforms marked a dramatic departure from the populist and consumption oriented policies of the previous UNIP political regime. Privatization of state-owned mines relieved the government from covering losses generated by the industry and improved the chances for the mining industry returning to profitability. Over time improvements in mining activities were recorded, which were further helped by the opening of new mines in the North Western region of the country. The liberalization policies in the agricultural sector spurred growth over the years, leading to the doubling of maize harvest in 2003, and helping boost a GDP growth rate of 5.0% by 2005 (MOFNP, 1995). Owing, in part to the long period of economic stagnation, and despite

progress in key areas such as privatization and budgetary reforms, economic growth, though positive had by the time of this study not exceeded the 5-7% threshold which is necessary to significantly reduce poverty. As a consequence, poverty remained a daunting problem, and led to the implementation of various poverty mitigation strategies. A lot of hope was placed on the country reaching the Highly Indebted Poor Country Initiative (HIPC) completion point, which was expected to release resources away from debt servicing to development programmes. Together with HIV/AIDS, poverty was targeted under the Poverty Reduction Strategy Programme (PRSP), a precursor to the HIPC programme. The PRSP aimed to reduce the poverty rate to 65 per cent of the population by 2004 and achieve strong and sustained economic growth. However, while poverty remained stable throughout the 1990s, it was observed to have increased since then. The PRSP was criticized for not having adequately targeted sectors such as education and water and sanitation and for the failure of the government to provide adequate counterpart funding. The low level of knowledge and understanding of the PRSP at district levels weakened the linkages between district development plans and the national PRSP.

As indicated above, poverty levels had increased since the 1990s (World Bank, 1994). The poverty levels provided a base for increasing disease burden, and the rising morbidity and mortality level in turn reinforced poverty. And the combination of poverty and disease, and especially HIV/AIDS has devastated the population. The HIV/AIDS has mostly affected the region along the major line of rail, which includes the Copperbelt, Lusaka, Central and Southern Provinces. The official statistics from the CSO puts the HIV prevalence level at 16 per cent of the population aged 15-49 (CSO, 2002). The infection rate was substantially higher among women (18 per cent) than men (13 per cent). There were some indications that the HIV infection rate for young adults was decreasing. The most worrisome finding from the ZDHS was that almost 50 per cent of the women in the 15-49 age bracket in urban areas were infected with HIV. Although government and donor communities designed programmes and allocated substantial resources to fight the disease, specific policy responses have been delayed or only partially implemented. This is attributable to the low absorptive capacity of the

districts and hospitals. The introduction of ARVS, while improving the lives of People Living with HIV/AIDS (PLWHAs), may pose additional pressures on the already strained health delivery capacity.

1.40: Health sector reforms

As observed above in the introduction and in line with other African countries, the government opted for strong state involvement in economic affairs after independence. It was argued that this would assure development and safeguard the public interest. This public interest view of the state assumed that a group of decision-makers could identify the public good and use taxes, market regulation and public enterprises to produce goods and services (Soeters, 1997). A fairly vibrant economy at independence both provided the resources for expansion of health services and ironically also laid the bedrock for an inequitable health system that favoured urban areas.

The World Bank (1994) observed that despite the fledgling economy in Zambia, the combined donor and government expenditure in the heath sector had remained fairly steady. Paradoxically, the country experienced a precipitous fall in health indicators. The main issue confronting the country' social sectors was not necessarily the lack of resources, but rather the allocation of these resources. The health reforms which were implemented from the early 1990s sought to address the problems caused by allocative and technical inefficiencies. The health reform agenda reflected the new government policy, which sought to make better use of resources in the sector and ensure access to a basic package of care for the population (Kalumba, 1997). These inefficiencies were manifested by excessive reliance on hospital care, and chronic shortages of staff and supplies at health centres, which had resulted in inappropriate use of hospitals.

The health reforms while shaped by domestic circumstances had a lot in common with social policy changes that were taking place in other parts of the world. The global change in social policy followed the economic recession of the middle 1990s and the resulting ideological shift following the collapse of Eastern Europe. The dominance of the state in economic affairs increasingly began to be questioned. Questions were raised

not only about public enterprises but also the modes of social service delivery (Mills et al, 2001). These concerns led to policy changes in the management and delivery of social services, as part of a broader economic agenda.

The wave of interest in changing the policies, practices and management systems within the health sector is often referred to as 'health sector reform', which is described as a "sustained, purposeful change to improve the efficiency, equity and effectiveness of the health sector" (Berman, 1995). The most widespread elements of health sector reforms include: restructuring of the public sector, usually a form of autonomisation or corporatisation; getting the incentive structures right; liberalisation of the health market; broadening the sources of funding for the health sector; and increasing the role of the consumer in the health system.

Zambia is one of the countries in which far-reaching health reforms were undertaken. The policies and strategies for the health reforms were outlined in the National Health Services and Strategies document of 1991 (MOH, 1993), which expressed the desire to build leadership, accountability and partnership in the management and production of health services. The MOH sought to attain a new leadership role in the health sector, by working with donors and national programmes in a coordinated way, as contrasted from the previous stand-alone donor supported programmes, which had limited impact on health outcomes.

Furthermore, the health reforms aimed at improving accountability of health services. It was recognized that the past MOH patterns of financial and staffing allocations reflected years of giving priority to high-technology curative care, in response to political and popular pressures, despite official support for primary care. The reforms aimed to reorient the focus away from central levels to a client-focused system, where health care providers were accountable to local health boards. Local communities participated through representation on health boards and contribution towards the cost of health services. Although user fees served as means of community participation, the policy was criticised for creating a financial barrier against access to health services. Studies on the

impact of user fees on utilisation, however, showed that reductions in attendance were only noticeable immediately after introduction of fees, after which utilisation normalized.

Although there had been a slump in health indicators, the reformers recognized that better health outcomes could be attained from improved coordination of the various actors in the sector. Under the reforms, the activities of national and international programmes were supposed to be harmonized in order to improve health outcomes. The partnerships also extended to the private sector, which was expected to complement the public sector in the provision of services. The polices sought to use market based policies such as subcontracting in order to improve the efficiency of public health services. Such policies included contracting within the public sector and between the private and public sectors.

1.50: Contracting and referral policies

The Zambian health sector was beset by financial and operational constraints, which over time manifested in an inefficient and less effective health delivery system. For decades, commentators (Freund, 1986; Kalumba, 1997; Soeter, 1997) on the Zambian health sector pointed to the inefficiencies of the system. For instance, urban based referral hospitals not only consumed a disproportionate amount of resources but also attracted skewed demand from an urban elite, to the disadvantage of the rural dwellers.

Beginning from the early 1990s, reforms aimed at improving the health service delivery system were implemented. Such policies included contracting within the public sector and between the private and public sectors. Contracting was encapsulated within the broader policy reform of decentralisation by which major responsibilities for the delivery of health services were devolved to lower levels, especially the district, where a new implementation agency, the District Health Implementation Team (DHIT), forerunner of the District Health Management Team (DHMT), was constituted. By decentralising the delivery of health services, the policy makers expected to reap efficiency gains through splitting health service purchasing and provision functions. The relationship between purchasers and providers of health services was to be governed by contracts. A central

purchasing agency, the Central Board of Health (CBOH) was created. The CBOH in turn subcontracted providers of health services such as District Health Boards (DHB) and Referral Hospital Boards (RHB) to provide health services. Although DHBs, could in theory contract with any RHB, they were limited to a range of historically determined hospitals.

Before the introduction of contracting, the players in the health system were governed by what might be termed implicit contracts[1], which were replaced by explicit contracts following the implementation of health reforms. Whether the introduction of explicit contracts improved the relationship among contracting parties is yet to be assessed. The findings reported in this thesis attempted to answer this question by studying the relationship between DHBs and RHBs. In order for the health system to run effectively, district health facilities and hospital services ought to be supportive of each other. This, however, had been lacking and uncoordinated decision-making and actions, were among the outcomes, which limited the extent to which synergies for maximising health services delivery could be captured.

The levels and patterns of referrals from lower level district health facilities to referral health facilities were a source of contention between managers at different levels of the health sector. In addressing these problems, policy makers implemented a range of policies and strategies aimed at influencing referrals. These policies included: improving the delivery capacity of health centres; introduction of by-pass fees; and closing of hospital outpatient departments (OPD). There was no clear verdict about the effectiveness of these polices. This study sought to contribute to knowledge regarding the difficulties of the relationships between DHBs and RHBs, using referrals as a tracer. With the aid of ideas from New Institutional Economics and empirical studies on contracting, the study attempted to understand the difficulties of contracting between DHBs and RHBs by explaining how the interaction of environmental factors,

---

1 Any form of relationship involving the exchange of goods or services among parties, even when not formalized could be termed an implicit contract. Such relationships become explicit contracts once they are formalized. The issue then becomes whether formalizing an implicit contract has advantages over retaining the implicit form.

transaction/contract attributes, principal-agent relationships, and incentive structures impacted on referral levels and patterns.

1.60: The Research Question

The United Kingdom (UK) and New Zealand among a few other countries have pioneered the use of contracts in health sector internal markets, by splitting health service purchasing and provision functions. The original idea was that purchasers and providers would be governed by renewable annual contracts. Competition among providers was in part expected to be achieved through the threat of exit from contracts. However, the limited level of contestability marking the internal markets left purchasers in locked-in relationships, and consequently high transaction difficulties (Goddard and Manion, 1998; Howden-Chapman and Ashton, 1994). Over time there was preference for long-term contracts in both the UK and New Zealand, which opened the way for more contracting difficulties (Propper, 1995).

The health sector reforms in Zambia had strands of internal market models developed in countries such as Sweden, the UK and New Zealand. As stated above, the CBOH contracted both DHBs and RHBs. District health boards, which were contracted for the provision of primary health care and first level referral services, in turn subcontracted with RHBs for the provision of first level referral services that they were not able to provide. Districts could contract with both government and non-governmental hospitals, the latter being predominantly missionary facilities. Internal contracting in the health sector had by the time of this study been operational for over a decade. This was the case despite research (Broomberg, 1994; Palmer, 2001) that questioned the applicability of internal contracts in Low and Middle Income Country (LMIC) settings. If contracting in developed countries such as the UK and New Zealand has faced marked difficulties, these may be still greater in LMIC countries.

By using ideas from NIE, this study set out to investigate the difficulties of contracting between DHBs and RHBs, using referrals as a tracer. Despite the plethora of initiatives aimed at harmonising links within the sector and addressing the issue of referrals

between DHBs and RHBs, there had been no analysis of the institutional setting in which these programmes/policies had been tried. The studies undertaken on referral systems (Atkinson, et al, 1999; CBOH, c2000; Murray, 2001) assessed the health seeking behaviour, user and provider perceptions of quality of care, and effectiveness of referral assessment tools. This thesis set out to contribute to knowledge by analysing the institutional setting under which referrals take place. This was done by using NIE tools to analyse how the interaction of environmental factors, transaction/contracting attributes, principal-agent relationships, and incentive structures impacted on referral level and patterns.

The research question that the study sought to answer was: What are the types of contracts between District Health Boards and Referral Hospital Boards; what difficulties do they encounter and how are these difficulties reflected in the levels and patterns of referrals between district health facilities and referral hospitals in Zambia?

1.70: Organisation of the thesis

The preceding **Chapter 1** provided the background to the study by describing the geographical location of country, economic changes and resulting impact on social indicators. The impact of the increasing disease burden, especially the effect of HIV/AIDS on the deterioration of social indicators was discussed and the combined impact on poverty highlighted. The attendant policy responses to worsening social indicators, and specifically health sector reforms were described.

Chapter 2 draws from the preceding introductory chapter, by summarising the policy of internal contracts, aims and objectives of the study. Thereafter, an overview of health reforms and referral policies is provided.

Chapter 3 discusses the conceptual frameworks on contracting, by drawing from the theoretical works on agency and transaction cost economics. This is followed by a presentation of the analytical framework, aims, objectives and methods of the study. The chapter ends with a commentary on the quality of data.

Chapter 4 provides a detailed discussion of the theoretical and empirical literature on contracting and referrals. The chapter is divided into three sections: theoretical framework on contracting; empirical literature on referrals and contracting in the health sector; and the health sector reform of internal contracts.

Chapter 5, which is the beginning of the results chapter presents findings on the difficulties of internal contracts between DHBs and RHBs. The first part outlines findings on the environmental factors, which is followed by a presentation of findings on the contracting/transaction factors, and manifestations of and responses to opportunism. The last part of the chapter presents district and hospital respondents' views on the value of explicit contracts.

Chapter 6 presents findings on the capacity of the frontline health providers by reflecting on their educational and professional backgrounds. Thereafter the providers' knowledge and experience with the referrals decision making process is presented, which is followed by a discussion of sources of referral problems between district health facilities and hospitals. The section ends with a discussion of the providers' identification of referral problems contrasted by the type of contract.

Chapter 8 presents findings on the patterns and levels of referrals by type of contract, using information obtained from hospital utilisation data and patient records. The chapter recasts the data, variables and methods which were used to study referral levels and patterns. Thereafter, the morbidity profile of the hospitals is shown and followed by a presentation of results on referral appropriateness. The last part of the chapter discusses the factors explaining the levels and patterns of referrals by contract type.

Chapter 9 discusses the methods, conceptual framework, findings and contributions of the study. The first part analyses the methodology, focusing on the value of combining quantitative and qualitative methods. This is followed by a discussion of the usefulness of New Institutional Economics (NIE). The latter part makes an argument about how the study findings contributed to knowledge.

Chapter 10 outlines the recommendation, which are decomposed into: improving the links between DHBs and RHBs; raising the competencies of providers in both district and hospital facilities; and improving the information system between DHBs and RHBs.

Figure 1.1: Map of Zambia

Map No. 3721 Rev. 4 UNITED NATIONS
January 2004

Department of Peacekeeping Operations
Cartographic Section

Chapter 2.00: Background to the study

2.10: Introduction

This chapter draws from the preceding introductory chapter, by focussing on the identified study area of internal contracts for referrals in the health sector. The chapter begins with a general discussion of the policy of internal contracts, and provides an overview of selected literature on the subject matter. This is followed by a statement of the aims, objectives and scope of the study. The latter part of the chapter provides a brief description of the health reforms, health financing policy and referral policies and programmes.

2.20: The policy of internal contracts

One of the key policy changes that accompanied the health reforms in Zambia was the introduction of internal contracts, through which purchasers engaged providers. As indicated above, the CBOH contracted DHBs to provide primary health services and first level referral services, while RHBs were contracted to provide second and third level referral services. The funds from the CBOH were remitted directly to the DHBs and RHBs, as opposed to the pre-reform period when they were channelled through the Provincial Medical Office (PMO).

In Zambia, referral hospitals comprised both public and private providers, although the latter were few. Services provided by not-for profit providers (mostly mission hospitals) were directly funded by the GRZ and thus considered part of the public sector (MOH, 2000). The hospital sector was organised in a three tier system comprised of the district (first level referral), general (second level referral) and central/specialised (third level referral) hospitals. The district health facilities and first level referral hospitals were part of the district health system, while the general and central hospitals were autonomous. The DHBs were funded for the provision of primary and first level referral services, while the hospitals were directly funded for the provision of second and third level

referral services. The grants from the Government took the form of cash disbursements and in-kind payments, such as drugs, staff, and medical supplies (MOH, 2000).

As indicated in the introduction, the rationale for contracting relates to theories of why governments fail in the provision of services. Contracting as a tool for managing the delivery of health services has its roots in the New Public Management (NPM) school, which posits that efficiency gains would accrue from adoption of market-based policies. This school of thought argues that exposure to the market and maintenance of public sources of funding would achieve the dual goals of realizing efficient production behaviors while simultaneously safeguarding the social goals of access and responsiveness to consumers. A central tenet of the new thinking is that the traditional organizational form of the public sector, hierarchical bureaucracy, is inherently inefficient and that the introduction of various market mechanisms will substantially enhance the efficiency of public service delivery.

Two main schools of thought underpin this analysis. The first, the property rights theory contends that the main source of inefficiency in the public sector is the weakening of property rights, so that the decision makers face few incentives to allocate resources efficiently. This is contrasted with the incentives facing entrepreneurs or shareholders in the private sector (Mills and Broomberg, 1998). The second critique of the public sector, argued by "public choice" theorists, is that the politicians and bureaucrats who control bureaucracies cannot be assumed to be acting in the public interest, since they are more likely to serve their own interests, or those of powerful interest groups (Walsh, 1995; Smith, 1997; Frant, 1996).

The use of contracting as a policy tool has been accompanied by the study of contracting difficulties. Such difficulties include the costs involved in creating and maintaining contracts. The extent of such costs will depend on the numbers of contracts that are written, the extent of detail in the specification and the intensity with which implementation is monitored. Transaction cost economics emphasizes the limitations of contracts and the need for flexible means of coordinating activities.

The principal-agent theory has been widely used in the health sector to illustrate the difficulties of one party engaging another to provide goods/services, in return for a mutually agreed reward. The principal usually needs the efforts and expertise of the agent, but has limited ability to monitor the agent's actions or evaluate whether the outcome is satisfactory. Agents are assumed to be opportunistic and unless they are closely monitored, may be unreliable, engaging in opportunistic behaviour. Principals too may maximise their benefits to such an extent that the relationship becomes untenable for the agent. The bodies of knowledge on contracting: property rights, public choice, transaction cost economics and principal-agent theories, collectively referred to as the New Institutional Economics have been widely used in studying institutions. A review of literature on these issues is provided below.

2.30: Aims, objectives and scope of the study

The aim of study was to analyse the nature and difficulties of contracting between DHBs and RHBs in Zambia, using referrals as a tracer. With the aid of ideas from New Institutional Economics and empirical studies on contracting, the study explored the difficulties of contracting by explaining how the interaction of contract/transaction attributes, incentive structures, information and sanction systems impacted on referral levels and patterns.

2.31: General objectives

A. Describe the nature of contracts between District Health Boards[2] (DHB) and Referral Hospital Boards (RHB) and assess how this has changed over time.

B. Assess the impact of different types of contracts on the levels and patterns of referrals between districts and hospitals.

C. Explore the processes through which varying contracts impact on the levels and patterns of referrals between districts and hospitals.

---

2 District Health Boards are legally constituted governing units responsible for overseeing the provision of district health services. Similarly, Referral Hospital Boards (or Hospital Management Boards) are governing units charged overseeing the provision of hospital health services.

2.32: Scope of the study

As stated above, the first part of the study analysed the introduction of explicit contracting in the health sector, focussing on public-public contracts between DHBs and RHBs. This entailed understanding how the policy of contracting had impacted on the relationships between DHBs and RHBs. Secondly, the study used referrals between DHBs and RHBs as a tracer of the relationship between the two and explained the differences in referral levels and patterns against the contracting environment.

The hospital study sites were chosen such that they represented the various referral contracting environments: contracts with improved health centre capacity, those not so supported, contracts with Non Governmental Organisations, and contracts with Government hospitals. Based on these criteria, four hospital case studies were purposively selected: University Teaching Hospital (UTH), Kitwe Central Hospital (KCH), Ndola Central Hospital (NCH), and Monze Mission Hospital (MMH). For each identified hospital, two DHBs, one in which the hospital was located and another nearby DHB were included in the study.

The UTH is the national referral hospital, which is located in the capital city, Lusaka. Although it is supposed to serve as the national referral hospital, it in effect acts as a district hospital, since it is mostly utilised by the district in which it is located and a few nearby districts. The Lusaka DHB has a constellation of twenty health centres, eight of which were upgraded, under a UK DFID funded project[3]. The local DHB, Lusaka Urban and one nearby district, Kafue were included in the study.

A second set of hospitals from the Copperbelt were included in the study. Ndola CH is located in Ndola district which is the commercial centre of the Copperbelt. The districts covered for NCH were Ndola Urban, and Masaiti. Kitwe CH is also on the Copperbelt.

---

3 The UK Department of International Development (Dfid) funded project involved upgrading health centres in the district by expansion of physical space in order to increase the bed space, allocation of more diagnostic facilities and management skills in order to enhance their capacity to handle more patients from the district and in the process decongest the UTH.

Both had not had health centre upgrading programmes. For Kitwe hospital, Kitwe and Kalulushi DHBs were covered.

Lastly, a rural based hospital, Monze was included in the study to highlight the issues surrounding contracting with a mission hospital. Monze mission hospital also had a HAHC, which was absent in the other hospitals. Monze DHB and Mazabuka DHB were included for this study site.

2.40: Health reforms and referral policies

2.41: Overview of health sector reforms

Zambia is one of the LMIC countries in which far-reaching health reforms were undertaken. The push for reforming the health sector arose out of the need to address the constraints that had led to an inefficient and less responsive health delivery system. The health reforms, which were implemented from the early 1990s sought to redress these weaknesses by tackling the capacity limitations caused by allocative and technical inefficiencies and manifested by excessive reliance on hospital care and chronic shortages of staff and supplies at health centres (Kalumba, 1997). The health care system was imbued with inequities characterized by tertiary, largely urban based health institutions consuming a disproportionate share of the health budget. The highly centralised management system did not help matters either as lower levels of the system were delegated to implement plans in whose formulation they had no input.

In order to depart from the high level of centralisation, lower levels of the sector were given more authority to provide and manage health services. In the place of direct management of health services, the reforms led to the devolution of management authorities to lower levels of District and Hospital Health Management Boards. The Provincial Medical Office (PMO), level was eliminated and in its place regional offices introduced. From an original nine PMOs corresponding to nine political boundaries, the health sector was subdivided into three regional health management blocks. However, the vastness of the country, and attendant difficulties of providing technical supervision

to health providers at the district level rendered the contraction of nine provincial offices into three regional offices unworkable. Subsequently and with the aid of leadership change in the MOH, the PMO office was re-instituted, but with reduced authority. While, the CBOH remained the central provider of health services on behalf of the MOH, the PMO was assigned responsibilities of providing technical backup services to DHBs and RHBs (Kamwanga, et al, 2000).

In addition to decentralisation, which was the major reform element, parallel policy changes were effected in other areas such as financing and human resources. On the financing front, the major reform was the introduction of cost sharing, by which users were expected to contribute towards the cost of health services through part- payments (MOH, 1997). Community contributions to the cost of health services were expected to have a countervailing effect on the escalation of unnecessary utilisation of health services and also serve as means for mobilising additional resources for the public sector.

With the devolution of authority to districts and hospitals, human resources management was left in the hands of local DHB and RHB managers (CBOH, 1998). The policy explicitly stated that the devolved units would take charge of their employment needs and policies. Through a process of delinkage, civil servants were intended to be retired from public sector employment and reengaged by autonomous boards. However, this process stalled. Not only did institutional factors, such as restrictive labour laws make it difficult to implement the delinkage policy, serious fiscal constraints rendered Government efforts at mobilising resources equally difficult. Thus, health reforms proceeded without changing the employment conditions of the majority of the workers in the public sector.

Threats to health reforms arising from institutional rigidities and government fiscal difficulties were further compounded by fluctuations in the commitment of politicians to the reform process. Although the political commitment to the reform process was on average applauded, intermittent disruptions were observed (World Bank, 1994; Gilson L and Mills A. 1995). Thus there were periods of rapid movement of the reform process

coinciding with the appointment of reform minded ministers and times when the process stalled on account of ministry leaders who were less supportive of the reforms. The influence of political factors on the pace at which reforms proceeded was exemplified by the delays in passing the Health Services Act[4], which was only passed after a change of minister.

2.42: The health financing policy

As indicated above, the policy of devolved management was accompanied by the introduction of new methods of financing. In the pre-reform period, the private health sector remained underdeveloped. This changed in the reform period, where health financing policy recognised the role that the private sector could play in not only augmenting public provision of health services, but also increasing private sources of financing to the public sector. To this end, a health financing policy was developed, which was based on cost sharing for the consumption of services within the BPC 5and cost recovery for services falling outside the BPC (MOH, 1998).

The MOH explicitly observed that 2nd and 3rd level referral facilities would not be allowed to use public funds to offer health centre type clinics (only first referral level care) (MOH, 1998, 23). Contracts, it was expected would oblige the health service providers to provide quality and quantity of services required by purchasers. Grants to RHBs were supposed to cover 2nd and 3rd level referral services and not first level services. If a hospital was providing first level care, it was obligatory to establish a contract fully covering this area, with the DHB requiring this service. This contract would be submitted to the CBOH for endorsement. Similarly, hospitals at 2nd and 3rd levels were not expected to run OPDs[6], unless they were fully separated from the hospital and run in accordance with a contract between the district and the hospital and being part

---

4 The health reforms were legally enshrined through the enactment of the National Health Services Act, 1995. Through the act, the Central Board of Health, District Health Boards and Referral Hospital Boards were formally established. The act outlined the responsibilities of the various boards, employment terms for staff and relationship among actors in the health sector.

5 The Basic Package of Care (BPC) describes a list of services and means by which the population gains access to the services, and for which public funds can be used. The package includes services at the first level of contact, first, second, and third referral levels.

6 An Out Patient Department (OPD) is a unit within the hospital where outpatients could obtain hospital services without being admitted.

of the district plan (CBOH, 1998). In utilizing their budgets, the health units were expected to observe ceilings regarding how much they could spend on various items. Deviations from these limits could be allowed in justifiable circumstances such as during epidemics. The guidelines further stipulated that DHBs could spend up to an upper limit of 80 percent of moneys generated from user fees, while second and third level referral facilities were permitted to use all of the resources that they mobilise through fees (MOH, 1998).

Whereas DHBs were funded for provision of PHC and first level referral services, some DHBs did not have district hospitals and relied on higher level referral hospitals to provide first level referral services (MOH, 2000). In such cases, the DHBs paid between 20-40 % of their grants for the purchase of referral services from hospitals. How much was paid was an outcome of negotiations between DHBs and RHBs. Where DHBs collected additional funds through user fees, they were required to remit 40% of fees collected to RHBs. While acknowledging the autonomy of service providers, the contracting guidelines explicitly stated that the ministry of health would positively intervene in the activities of health providers and purchasers in order to monitor as well as play an arbitration role where parties to contract were in dispute (MOH, 1998).

2.43: Referral policies and programmes

The health system in Zambia followed a hierarchical organisational setup. Commentators observed that the various levels of the health sector hardly worked in unison and system failure was evident (MOH, 1992; Kalumba, 1997). The levels and patterns of referral was one such area through which this system failure was manifest. As indicated above, simple diseases and health conditions detailed in the Basic Package of Care (BPC) ought not to be treated in high level referral facilities, which is contrary to the situation at the time of the study (see Chapter 6).

According to the BPC, the top ten diseases/health conditions which contribute most to the disease burden in Zambia were supposed to be treated at district level facilities (Table 2.1). Only complicated cases of Acute Respiratory Infection (ARI); perinatal conditions (infant hydrocephalus, ICU, acute respiratory and renal support); tuberculosis (chronic

lung disease) gastro infections (surgery for intestinal complications); and maternal conditions (management of vesico-vaginal fistulas) could reach the second level referral points. And out of these, only perinatal conditions, gastro-infections, maternal conditions, should ideally reach third level health facilities (BPC reproduced in appendix 8).

Table 2.1: Top ten diseases/conditions contributing to the burden of disease by level of care/service provision

Disease/ Condition	Community level/HP	Health Centre	1st level hospital	2nd level hospital	3rd level hospital	1996 DALYS
Malaria	+	+	+	0	0	6,777,962
ARI	+	+	+	0	0	5,451,037
AIDS	+	+	+	0	0	3,205,208
Diarrhoea	+	+	+	+	0	2,146,002
Perinatal	+	+	+	+	0	1,320,444
TB/Leprosy	0/+	+	0	0	0	266,799
Malnutrition	+	+	+	0	0	125,955
Other GI	0/+	+	+	+	+	106,150
Maternal conditions	+	+	+	+	+	91,887
Anaemia	0/+	+	+	0	+	65,625

Source: MOH/CBOH, 2000, Basic health care package from Community to 3rd level
+ Disease should be treated/attended to at this level
0 Disease should not be treated/attended to at this level

As was observed in the introduction, the problems regarding the level and patterns of referrals between district health facilities and referral hospitals led to the implementation of various polices and programmes. Community-focused programmes included awareness activities to reorient people's health seeking behavior and financial-based policies aimed at eliciting appropriate health seeking responses from the community. Where individuals self-referred to a higher level health facility for conditions that could be handled at lower service delivery points, they were required to pay cost recovery prices. Accordingly, where an individual sought to use hospital services, without passing through a health centre, they were required to pay a by-pass fee. As indicated above, user fees were introduced for the dual purpose of mobilising resources and achieving consumer responsiveness. On the downside, it was been observed that the policy of cost-sharing was implemented without sufficient guidelines and collaborative work with other ministries being put in place for providing exemptions, setting prices and monitoring the scheme. This resulted in a situation where people who were exempted from paying or

should have received exemption certificates from the Ministry of Community and Social Services (MCDSS), were charged, denied care or deterred from accessing care. In the same vein, although the policy explicitly stated that once a person had been referred, they would not be charged at the referral point, some were (MOH, 1998).

One of the recent policies that had been implemented by the time of data collection for this study was "right-sizing" of hospitals. This policy was aimed at reaffirming the pyramidal referral system where the various levels were distinct and recognised as such. To this end, some hospitals were upgraded while others were down-sized. It was maintained that the down-sized hospitals did not have the capacity to function as second level referral facilities. The policy of right-sizing met resistance both from politicians and hospital managers. Political resistance rested on fears of local politicians losing support with communities, while managers feared the loss of power associated with managing a higher referral facility (a general hospital reports directly to the Provincial Health Director (PHD), whereas a District hospital reports to the local DHB).

Although referral hospitals were supposed to cater for higher illness severity patients from across the regions, in practice, they mostly catered for populations of districts in which they were located. The most widespread policy by which efforts were being made to control local demand for hospital services was the creation of Hospital Affiliated Health Centres (HAHC)[7]; and closing of hospital OPDs. By the time of data collection, Monze and UTH had established a HAHC, and plans were afoot to close the OPD at Kitwe and Ndola.

2.50: Conclusion

It is clear from this review of health polices that referral issues are prominent. Policies and programmes targeting referrals have included rationalising access to hospitals through closing hospital OPDs, creating HAHCs, and introduction of by-pass fees. In line with the broader health sector reforms, the policy of internal contracts was

---

7 A Hospital Affiliated Health Centre (HAHC) is a health centre, which is located within hospital premises. Following the implementation of health reforms, hospitals were requested to cease providing OPD services. The HAHCs were thus established to replace hospital OPDs and were managed by DHBs.

introduced to manage referrals between districts and hospitals. The plethora of programmes/policies targeting referrals is testimony to the centrality of these issues. Referrals could be used both as a policy instrument and as an indicator of policy outcome.

Chapter 3.00: Review of literature on contracts and referrals

3.10: Theoretical Framework on contracting

3.11: Introduction

This sub-section of the literature review provides an overview of the conceptual frameworks on contracting. Drawing from theoretical works on agency and transaction cost economics, the section starts by outlining the behavioural and transaction factors that characterise contracts. The interaction of behavioural attributes of bounded rationality and opportunism and transaction characteristics of asset specificities are discussed in relation to the contracting difficulties and agency problems that arise.

3.21: Transaction cost assumptions

One of the basic tenets of neo-classical economics is that competitive forces in an optimally functioning market lead to efficient allocation of resources. The perfect competitive model assumes that: the goods are private goods (they exhibit excludability, rejectability and rivalry); rights can be perfectly delineated; and there are no transaction costs. A perfect competition model assumes spot transactions, where transacting parties have no long-term relationships.

However, many goods and services are not bought in an instant and transaction costs are often substantial. Buyers and sellers may undertake an exchange of goods and services over a period of time and develop long-term relationships. Contracts are one method by which such relationships can be governed. The study of contracting has been aided by new institutional economics, which is a collection of theories which deal with considerations of information, motivation, and innovation and the implications for the best possible organisation of productive activity.

Bounded rationality and opportunism

Transaction cost economics is founded on two broad set of assumptions in behaviour and transaction dimensions (Williamson, 1985). While the perfect competition model

assumes perfect rationality, much of transaction cost economics assumes "bounded rationality". Bounded rationality is a semi-strong form of rationality in which economic actors are assumed to be intentionally rational but only limitedly so. An economising orientation is elicited by the rationality part of the definition, while the study of institutions is encouraged by conceding that cognitive competence is limited. Transaction cost economics is concerned with the economising consequences of assigning transactions to governance structures in a discriminating way. Confronted with the realities of bounded rationality, the costs of planning, adapting and monitoring transactions need expressly to be considered. Transaction cost economics seeks to find out what governance structures are more efficacious and for which transactions.

As with rationality, three types of self-interest are identified. The weakest form of self-interest is obedience, which is marked by complete obedience and under which economic problems are greatly simplified. Simple self-interest is the mild form, assumed for neo-classical economic problems. A stronger version, obtains with the assumption of opportunism, on which transaction cost economics is based (Williamson, 1985). By opportunism is meant self-interest seeking with guile. This includes, but is scarcely limited to more blatant forms such as lying, stealing and cheating. Opportunism more often involves subtle forms of deceit. Both active and passive forms and both ex ante and ex post types are included. Opportunism refers to the incomplete or distorted disclosure of information, especially when calculated to mislead, distort, disguise, obfuscate or otherwise confuse.

The combination of bounded rationality and opportunism gives rise to varying contracting situations (Table 3.1). If both assumptions are absent, contracting is in a state of bliss. When bounded rationality is present and opportunism absent, general clause contracting obtains. The absence of bounded rationality and presence of opportunism leads to comprehensive planning. However, when both opportunism and bounded rationality are present, serious contractual difficulties arise.

Table 3.1: Contractual difficulties under bounded rationality and opportunism

		Bounded rationality	
		Absent	Admitted
Opportunism	Absent	Bliss	General clause Contracting
	Admitted	Comprehensive Contracting	Serious contractual difficulties

Source: Williamson O, (1985) The Economic Institutions of Capitalism. The Free Press: New York.

Under transaction cost economics, it is maintained that there are rational economic reasons for organising some transactions one way and other transactions another. Williamson (1985) observes that a predictive theory of economic organisation requires that the factors responsible for differences among transactions be identified and explicated. The principal dimensions with respect to which transactions differ are asset specificity, uncertainty, and frequency. The first is the most important and most distinguishes transaction cost economics from other treatments of economic organisation, but the other two play significant roles.

Asset specificity

Transactions that are supported by investments in durable, transaction specific assets experience "lock in" effects, on which account autonomous trading will commonly be supplanted by unified ownership (vertical integration). Thus, although there may be large numbers of qualified bidders at the outset, if the winner of an original contract acquires a cost advantage, the contract may subsequently experience "lock-in" difficulties. This may arise by reason of location, or learning, including the acquisition of undisclosed or propriety, technical and managerial procedures and task-specific labour skills, which would result in bidding parity at contract renewal being upset with the result that ex-post contracting strains predictably develop if discrete contracting is attempted (Williamson, 1985).

A transaction could either be based on general-purpose or specific assets. In the case of the former, interruptions to a contract do not pose much of a problem as the assets could

easily be deployed to alternative uses. However, the matter is more complicated when it involves transaction specific assets. There are four types of asset specificity: site specificity (successive stages of production located close to each other); physical asset specificity (assets are mobile and specificity is related to physical features); human asset specificity (skills and knowledge embedded in the labour force are specific) and dedicated asset specificity (for example investment in a plant for meeting the needs of a particular client).

Uncertainty

Williamson (1985) argues that the interesting issues with which transaction cost economics is involved reduce to an assessment of adaptive, sequential decision making. Contingent on the set of transactions to be effected, the basic proposition is that governance structures differ in their capacities to respond effectively to unforeseen disturbances. These issues vanish were it not for bounded rationality, since then it would be feasible to develop a detailed strategy for meeting all contingencies in the future. Interesting problems of economic organisation arise only in conjunction with uncertainty. The uncertainty of interest is that which is attributable to opportunism, which Williamson defines as behaviour involving guile, intended to further self-interest.

Behavioural uncertainties would not pose contractual problems if transactions were known to be free from exogenous disturbances, since then there would be no occasion to adapt and unilateral efforts to alter contracts could and by assumption would be avoided by the courts or other third party appeal. Insistence on original terms would thus be observed everywhere. The influence of uncertainty on economic organisation is conditional. Specifically, an increase in uncertainty is a matter of little consequence for transactions that are non-specific. Since new trading relations are easily arranged, continuity has little value, and behavioural uncertainty is irrelevant. Accordingly, market exchange continues and the discrete contracting paradigm holds across standardised transactions of all kinds, whatever the degree of uncertainty.

Frequency

The benefits of specialised structures are greatest for transactions supported by considerable investment in transaction-specific assets (Williamson, 1985). Whether the volume of transactions processed through a specialised governance structure utilises it to capacity is then the remaining issue. The cost of specialised governance structures will be easier to recover for large transactions of a recurring kind.

Table 3.2: Contractual difficulties under bounded rationality, opportunism and asset specificity

Behaviour assumption			
Bounded rationality	Opportunism	Asset specificity	
0	+	+	Planning
+	0	+	Promise
+	+	0	Competition
+	+	+	Governance

Source: Williamson, O. (1985) The Economic Institutions of Capitalism: The Free Press, New York.

3.23: Types of contracts

The combination of bounded rationality, opportunism and asset-specificity imply varying governance systems as detailed in table 3.2 above. When bounded rationality is absent and asset specificity and opportunism present, the "planning" governance model applies. The absence of opportunism and presence of asset specificity and bounded rationality describes a "promise" design. A competitive governance structure obtains in the absence of asset-specificity and presence of bounded rationality and opportunism. However, when all the assumptions are present, the need for "governance" of contracts is introduced. The combinations of behavioural assumptions and transaction attributes give rise to three governance systems of hierarchy (where all transaction and behaviours assumption are present); hybrid (containing combinations of these assumptions); and market (absence of asset specificity). The three governance systems in turn imply different forms of contracts.

Mcneil (1978) has suggested a continuum of contract types corresponding to the three governance forms, which are classical, neo-classical, and relational contracts. Classical contracts govern truly discrete transactions, occurring between total strangers, brought together by chance and never to see each other again. Neo-classical contracting is characterised by greater flexibility and third party arbitration of disputes. A recognition that the world is complex; that agreements are incomplete; and that some constraints will never be completed unless both parties have confidence in the settlement machinery characterises neo-classical contract law. At the end of the contract spectrum is relational contracting. As opposed to neo-classical contracts where the reference point for effecting adaptation remains the original agreement, the reference point under a relational approach is the entire relationship as it has developed over time (Macneil, 1974; 1978). "Relational contracting" reflects progressively increasing duration and complexity of contract: contracts do not relate to a single discrete purchase, but to long term-agreements over many different exchanges.

3.24: Incentive structures

One major aspect in which hierarchies and markets differ is in respect of the incentive structures. As a general rule, incentives in hierarchies are flat or low powered. Asymmetries of information and divergence of objective functions between agents and principals are among the principal factors that affect incentive structures (McPake, et al 2002; Smith, 1997). The principal usually needs the efforts and expertise of the agent but has limited ability to monitor the agent's actions or evaluate whether the outcome is satisfactory. Rosen (1993) observes that agents behave honestly if confronted by a scheme that makes such behaviour consistent with self-interest. Evidently, the scheme must either reward good behaviour or punish bad behaviour (malfeasance).

Low and high powered incentives

Both agency and transaction cost literature deal with incentive structures, which are associated with contracting. The incentive structure in part determines whether an activity would be better carried out in the market or through hierarchical organisations.

Frant (1996)8 refers to high powered and low powered incentives, the former being associated with market transactions in which the efficiency gains from a transaction flow directly to the transacting parties. In hierarchies (organisations) on the other hand, incentives are low powered. The particular individuals may get a raise, promotion, and so on, but generally are not able to personally lay claim to the gain from trade.

In the private sector, high-powered monetary incentives promote efficiency in at least two ways (Frant, 1996). On the supply side, entrepreneurs are induced to find innovative and cost-saving ways to produce their goods. On the demand side, entrepreneurs are induced to produce goods that people value highly. Both of these are broader definitions of efficiency that are used by economists and that attach no significance to manufacturing a product cheaply unless it is a product that people want. Although high-powered economic incentives encourage efficiency in the production of goods and services, they may go against the social goals of ensuring access to services for needy populations. Social goals such as ensuring equity of access to services necessitate the attenuation of high-powered monetary incentives.

Political levers may be used to safeguard social goals, where these are threatened by high-powered monetary incentives. However, perverse effects of political influences ought to be taken checked. In the public sector, high-powered political incentives do not appear to be a particularly effective substitute for the profit motive in promoting productive efficiency. But they do promote allocative efficiency by increasing the likelihood that the public sector's products will be valued by the people. As with high-powered monetary incentives in the private, so too with high-powered political incentives in the public sector, there may be perverse effects when monitoring of quality is difficult. Frant (1996) notes that one way of attenuating these high powered political incentives is

---

8 Frant (1996) observes that while transaction cost economics has been successfully applied in studying the private sector, attempts at applying the framework to the public sector have been less successful. As a way of overcoming this difficulty, Frant proposes the concept of high-powered and low-powered incentives, in place of transaction costs. He suggests paying attention to political opportunism, which may lead to politicians engaging in exploitative behaviour. He gives an example of the tendency for politicians to spend money on highly visible things, especially when voters are not well informed and not able to adequately monitor the activities of politicians.

through the appointment of independent public authorities, which compels voters and politicians to commit themselves in advance in order to avoid undesirable behaviours.

Incentive management

The mechanisms employed to affect incentives could be taken to be forms of incentive management[9]. As McPake et al (2002) have observed, the need to get the incentives right has become prominent within the health sector. Given the informational, transaction, administrative and political constraints, the question has turned to examining whether incentive management may better accomplish the objectives of regulation. Incentive management can be achieved through government subsidising or taxing regulated firms. Government subsidies may either take the form of direct subsidies, government loans at low interest rates, or government guarantees on the private market (McPake, et al 2002). Many subsidies in the health sector are not of a price subsidy nature but rather flat rate subsidies to specific institutions. Flat rate subsidies only work in the context of not-profit maximising behaviours. Government may also manage incentives through making transfers to participants through its purchasing role. This is not different from a subsidy in analytical terms but is associated with greater explicitness of contractual arrangements. This approach is analogous to what Smith et al (1997) call the behavioural approach to addressing PA problems, where an attempt is made to bring the behaviour of the agent closer to that of the principal using hierarchical chains of command.

Regulation could be thought of as an action to manipulate prices, quantities and quality of products (Maynard, 1982). The action of agents and principals may be brought into alignment by effecting change in outcomes such as sharing and transference of property rights (Smith et al, 1997). Regulation may be accomplished by rules and regulations, public ownership/provision of goods, government expenditure and taxation. It may also take the form of legal restrictions, or incentive regulation. Incentive regulation involves the use of rules to regulate variables such as price. The need for incentive regulation could be limited by restructuring incentives such that both principals and agents are willing to work to together for a common goal. Within the design of a contract, each

---

9 Deliberate attempts to manipulate incentives in order to achieve desired objectives. Source: McPake et al (2002)

person must be willing to participate – the participation constraint. Second, the contract needs to structure incentives in order to meet the desired objectives: the incentive compatibility constraint.

3.25: Conclusion

Spot transactions which are carried out on the market do not need contractual arrangements and thus no transaction costs are incurred. However, once the nature of the good or service is such that long term engagement between transacting parties is desirable, transaction costs assume greater significance and contracting becomes a preferred option. Contracts are, however, imbued with difficulties, which the theoretical bodies of transaction cost economics and principal-agent theories can help understand.

3.20: Empirical literature on referrals and contracting in the health sector

3.21: Introduction

The first section of this chapter provides an overview of selected literature on referrals, with a deliberate slant on literature from developing countries. The literature on referrals is discussed under three subjects of: community; provider; and institutional based determinants; The latter part of the section positions the issue of referrals in the broader policy context of health reforms, which leads to a discussion of contracting in the health sector, with a focus on internal contracts.

3.22: National referral systems

Given the scarcity of literature on referrals in developing countries, any traceable articles on referrals in LMICs was reviewed and summarised in table 3.1 below. The review shows that almost all the studies used routinely collected hospital data, which were augmented with data from health centres. The list of studies on referral in LMICs given in table 3.1 below shows that most of them focused on patients/minders (Atkinson, et al, 1999; Bossyns and Van Lerberghe, 2004; Font et al, 2002; Nordberg et al, 1996; Siddiqi et al 2001); and frontline health workers (Atkinson, et al, 1999; Bossyns and Van Lerberghe, 2004; Ohara, 1998; Siddiqi et al, 2001), and only two included institutional managers (Macintyre et al, 2003; Ohara, 1998). The studies can be meaningfully decomposed into two classes: those concerned with the patient/community interface and those focussing on service factors. There were hardly any focussing on institutional factors, a point noted by Bossyns (2004). The increasing importance of institutional actors especially under the now widespread sector reforms, which are characterised by the rolling out of the state and devolution of authority to autonomous institutions necessitates such institutional based investigations.

Tables 3.3: List of studies on referrals for developing countries by author, country, study objectives and focus, target populations and key findings and conclusions

Author, country and referral attribute studied		Study objectives and data collection sites	Target study population	Key findings and conclusions
	Bossyns and Van Larberghe (Niger) HC provider decision making. Individual/household HSB.	How providers and community understand referral system. Barriers to proposing and accepting a referral. Data collected from health centres and community.	Semi-structure interviews with providers. FGDs with patients and minders. Semi-structured interviews with referred patients.	Resolving financial and distance barriers not enough. Need for improving district systems and provider capacity.
	Ohara et al (Honduras) HC and hospitals provider decision making.	Provide a situation analysis of referral system. Propose improvements of referrals registry Data collected from hospitals and health centres.	Patient record reviews of received referrals. Patient record reviews of sent referrals. Semi-structure interviews with health providers.	Low referral rates at health centre, area hospitals and regional hospitals. Regional hospitals were bypassed. Providers seemed not to understand/appreciate referral systems. Service at peripheral institutions should be improved Improving information flow among staff.
	Font et al (Tanzania) Referral volumes	Estimate the rates and appropriateness of referral. Analyse factors causing delay of referrals. Data collected from HC, hospitals and child minders.	Review of paediatric records. Questionnaire-based interviews with minders of children.	Low rates of referral to hospital. Referrals are generally appropriate. Adaptation of IMCI so that more children are managed at peripheral levels.
	Lerberghe and Pangu (Zaire) Hospital utilisation patterns	Assess Influence of health coverage on hospitalisation patterns. Data collected from hospitals.	Review of hospital patient records. Data compared for PHC covered and non-covered areas. Physician assess the appropriateness of referrals	Non covered areas have more than twice the admission rates of covered areas.

Table 3.3 contd.

Author, country and referral attribute studied	Study objectives and focus	Target study population	Key findings and conclusions
Atkinson, et al (Zambia) Individual//household decision making. HC and hospital decision making.	Assess the HSB of urban populations, users' perception of quality of care. Assess functioning of referral system. Data collected from HCs, hospitals and households	Review of patient records from HCs and hospitals Provider and patient views of quality of services. Household survey.	National referral hospital not functioning as such. National referral hospital OPD functioning as additional health centre. Few people by-passing health centres. Links between health centres and hospitals are weak.
Siddiqi et al (Pakistan) Household decision making. HC decision making.	Assess whether referral system is functioning as it should. Assess household health seeking behaviour.	Interviews with households experiencing an illness. Interview with HC and hospital staff. Interviews with patient attending health centres, district and teaching hospitals. Review of hospital OPD patient records.	Referral system does not work. Improving services capacity. Bidirectional flow of referrals information should be emphasised. Raising community awareness of referral process.
Sanders et al (Zimbabwe) District and central level hospital decision making.	Assess functioning of referral system. Assess appropriateness of care and admission.	Review of patient records at hospital, using tracer conditions of pneumonia in children and malaria in adults.	Central level districts catered for similar conditions as district hospitals. Appropriateness could be improved by rationalising access to specialist facilities and improving provider capacity.

Table 3.3 contd.

Author, country and referral attribute studied.		Study objectives and focus	Target study population	Key findings and conclusions
	Low et al (Namibia) Referral volumes. Provider decision making.	Assess how the referral system was operating. Determine magnitude of referrals from PHC to secondary level hospitals.	Health facility data on referral from PHC to secondary level of care.	In order to specify how pyramid referral system can be improved, there is need for information on different types of by-passing.
	Macintyre and Hotchkiss (Kenya) Individual and community HSB.	Assess the role of community insurance and transport effects on referrals	Longitudinal data over eight year period of community insurance scheme	Community financing schemes for transport are supported. Such schemes would help in building trust in the health system. They will also improve sustainability through local institutional support.
	Macintyre et al (Kenya) HH/Community HSB. HC provide decision making.	Assess the influence of environmental, social and health services factors on referrals.	Referral rates compiled from routine hospital data. Qualitative data compiled from in-depth interviews with health staff.	Referrals across settings with similar quality of care are different. A better understanding of referrals entails taking environmental, social and health factors into account.
	Nordberg et al (Kenya)	Determine referral rate. Assess characteristic of patients and reasons for referral.	Interviews with patients referred to hospital.	Formal referrals very low, high rate of informal referrals. Major reasons for low referral were financial constraints.

The reforms in the health sector were driven by the apparent inefficiencies of government provision of social services. The new thinking regarding the role of Governments in economic activities, under the New Public Management school spawned policy reforms aimed at improving efficiency, achieving equity and effectiveness of service provision. A key departure from previous policy shifts in the health sector was the use of market based approaches, either directly or indirectly. Since the patterns and levels of referrals could be used as indicators of how well a health sector is performing, they could be targeted either explicitly or implicitly as target variables. Furthermore, changes in referrals may indicate outcomes of underlying policy change.

National referral systems are designed such that patients move 'up' through a pyramid-shaped structure. Starting with the 'typical' entry point at the base of the pyramid—for instance, the primary care clinic, dispensary, or health post in a community—the patient moves to a larger health facility in the nearest area, such as the district hospital or a private facility. Referral is warranted when the type or severity of illness presented supersedes the training or experience of the staff, or when appropriate drugs or equipment are not available at the basic health care level. The ideal—and most efficient arrangement for both the patient and the health system—is when patients receive the most appropriate care at the lowest level possible in the system (WHO, 1987). The assumption is that the lower level care is cheaper in terms of human and technical resources, and that patients pay increasing amounts and incur in-kind costs , the higher up the pyramid they seek care.

An effectively running referral system was taken to be a fulcrum of an efficiently functioning PHC system. The Declaration of Alma Ata (WHO/UNICEF, 1978) stated that 'primary health care (PHC) activities are supported by successive levels of referral facilities . . . and [well-functioning referral systems] are essential to create confidence in the whole system. Ideally, there ought be no direct access to hospitals: the first contact of health centre level is the gate of entry into the system and the one which has the overall responsibility for the care of the community (Van Lerberghe, 1990; WHO, 1987). While recognising the importance of rationalising referrals from primary to secondary

and tertiary levels, the equally vital role of ensuring effective referrals for appropriate care (so called positive referrals, Van Laberghe and Pangu; 1988) ought not to be overlooked (Macintyre et al, 2003).

Experience from around the developing world has showed that direct access to hospital was widespread (Atkinson, 1999; Akin and Hutchinson, 1991; Atkinson et al, 1999; Ohara et al, 1998; Sanders; 1998;). Hospitals usually attracted a large number of people with problems that could be handled at the lower levels of contact. As a result of community preference for hospitals over health centres, the latter were often underutilised. The frequently cited reasons for by-passing health centres were: the poor state of many district-level secondary care facilities, inadequate training of primary care staff, the lack of economic resources, problems associated with physical transport and the state of the roads; and price differences between health centres and hospitals (Lerberghe, 1990; Macintyre, 2003).

Health systems which were characterised by unbridled access to hospitals are most likely to be inefficient, relative to those with gate keepers. Having hospitals involved in the delivery of primary health care had many pitfalls: it may result in lower quality of care; it disadvantaged health centres because they suffered from hospital competition for resources and prestige; and it made the hospital work below its potential because it was overloaded with primary care work (Van Lerberghe, 1990). In order to improve the links between layers of the health system, it ought to be ensured that the constituents performed tasks that they were best suited to; what was done at one level was not done at the other; avoiding overlaps; recognising that the health centre was the place where the synthesis was made and the hospital was the place where technical activities are carried out; and when human relations are more important and techniques less so, the health centre was a better place than the hospital and vice versa (Lerbeghe, 1990).

Attainment of these ideals was, however, only feasible under qualified conditions: the need for a district system within a specified area for which the network of health centres and hospitals is accountable and avoiding intermediate structures, which may merely

delay a referral when it is needed. However, in some cases intermediate health centres[10] [called reference clinics in other literature] have been instituted precisely for the purpose of alleviating pressure on hospitals, with mixed outcomes. In Zambia they led to an increase in the uptake of services at health centres, reflecting unmet need, while leaving the pressure on the hospital unchanged (Atkinson et al, 1999), while a similar programme in Honduras was undermined by capacity limitations at the intermediate referral levels (Ohara, et al, 1998). While these case studies may, at face value, suggest limited impact of reference health centres on improving referral systems, they illustrate the intricate nature of factors affecting referrals. Recognition of these multiple factors is critical in order to evolve effective referral rationalisation policies. A comprehensive study of referrals would entail examination of economic, social, technical and psychological factors that explain the referral making process from primary to secondary levels of care. Macintyre et al (1999) suggested three approaches to studying referrals, all operating along interfaces—the individual/community, the patient/provider and the institutional links. The schema fits in perfectly with Thaddeus and Maine's (1994) classification of factors that affect the interval between onset of obstetric complications and its outcome: factors delaying the decision to seek care (individual/household); delay of arrival at a health centre (community factors); and delay in the provision of adequate care (/provider/institutional).

3.23: The determinants of referrals

The individual/household/community based determinants

Medical anthropologists have focused on health seeking behaviour from the household or individual perspective, and have included some aspects of referrals in their studies. Studies focussing on individual factors that affect referrals noted that the decision to seek care and subsequently follow the referral route was determined by cost/income; perceptions of illness, social position of the ill person, and transport facilities (Macintyre, 1999; Thaddeus and Maine, 1994). Such studies consistently showed positive

10 Intermediate health centres are clinics designed to provide intermediary health services at a lower level than those provided by referral hospitals, but higher than those provided by health centres. They are established in order to rationalise access to hospital services.

associations between improved women's status, education level, and economic status and utilisation of health services.

Individual factors impacted on referral decision making by interacting with household attributes. Bossyns and Van Larbheghe (2004) observed that in many developing countries, referral decisions and their management were a social event, involving the patient's family and friends. They recounted the situation in Niger where social norms resulted in minimal referrals for cases involving younger children or the elderly. As these were perceived to be at higher risk of dying, it was preferred to nurse them locally, so that if they died, they would be buried near their homes.

Joint household decision making in identification of medical problems, and recourse to taking action impacted on referrals and had consequences for health outcomes. The importance of timely decision to seek care was especially important in the case of maternity cases, where such decisions impacted not only on the maternal but also on neonatal outcomes (Murray at el, 2001; Fawcus, et al, 1996).

After individual/household determinants of health seeking behaviours, community factors are also critical determinants of health seeking behaviours and referral decisions. By far, the single most important community level factor that impacts on referrals is transport. Numerous studies have demonstrated how inadequate transport facilities and financial constraints limited referrals, by impacting on the rate at which individuals could seek and access care (Bacq and Rietsema, 1997; Nkyekyer, 2000; Macintyre and Hotchkiss, 1999; Thadeus and Maine, 1994). The spatial distribution of facilities and availability of transport means affected the extent to which referrals could be made. The impact of health facilities distribution and transport facilities had been particularly raised in studies on maternal mortality, where the impact was widely recognised (Bacq and Rietsema, 1997; Murray et al, 2001; Thadueas and Maine, 1994).

Provider based determinants

Provider-based analyses are important in order to understand the impact of patient–provider relationships on referrals from primary to secondary levels of care. The very reason why patients have to be referred is that providers at lower health facility levels lack the requisite professional and practical expertise to provide the necessary care. The level and type of training of providers affected what they could, or felt able to treat (Maine, 1997; Koblinsky et al., 1999). Studies on provider attributes have documented high referral practices arising from limited experience, stress and heavy workload (Bachman and Freeborn, 1999). While improvements in professional competence and experience may improve the patterns and level of referrals, this is not sufficient for achieving desired provider behaviour. A reorientation of provider idiosyncrasies such as observed in Niger, where nurses were reluctant to refer, for fear of being labelled "incompetent" need to be addressed too (Bossyns and Van Lerberghe, 2004).

Staff may gain in confidence and skill level merely through their length of practice. The longer they were resident in a primary care setting, the more conditions they felt able to diagnose or treat; on the other hand, habits of referring particular types of patients could also become ingrained (Omaha et al., 1998). Aside from professional qualifications and experience, provider perceptions about patient efforts to take care of their health was an equally important determinant of providers' referrals behaviour (Trevor, 1999; Leonard, 2000). Where a provider perceived that a patient was not doing much to help maintain their health, the provider could react by referring such cases to other providers.

Improving the capacity of providers to make appropriate referrals can be enhanced through retraining programmes and supplying of the requisite means with which to work. An all round approach to raising the capacity of providers would entail: availing the necessary resources to work with; training programmes to improve interpersonal relationships and responsiveness of care; regular support from trained supervisors; and development of appropriate incentive structures.

Institutional determinants

As already outlined in the introduction, a review of studies on referrals illustrates the dearth of institution-focussed studies. The few institutional based studies on referrals focused on the receiving end, the referral hospital and recorded referrals as a percentage of all new patients seen at the secondary level, rather than the primary level (Atkinson et al., 1999; Sanders et al., 1998; Omaha et al., 1998). As a result, much of the referral research focused on patients that 'by-pass' the lower level institutions. This occurrence was then interpreted as increasing the cost of health care both for the institution and the patient (Airey, 1989; Akin and Hutchinson, 1999; Mwabu, 1989; Sanders et al., 1998).

Nordberg et al.'s (1996) study, which used patient referral data from patients already in a Kenyan district hospital together with census data, showed that 8.7 % of the cases were referred annually per 1000 population in the catchment area. The authors reported that between 0.28% and 1.8% (with a mean of 0.5%) of patients seen at the primary care level were referred for care at district hospitals. They observed that the rate was lower both for the average reported for Meru District in the early 1980s, which, according to the authors may reflect the high quality of staff training and supervision in the Kenyan health sector. Staff training and experience, as already stated are important determinants of referrals. Low quality of peripheral services is the most cited reason for people by-passing these facilities, in preference to the perceived better quality services provided at hospitals (Atkinson, 1999; Schwart, 1995; Sanders, 1998; Siddiqi, 2001).

Since referrals have been identified as a source of inefficiency in the health sector and given that reducing costs is at the heart of reforms, it should logically follow that referrals would be both a policy instrument and a measure of policy outcome. The need to get referrals right is essential especially in the current context of major policy shifts in many developing countries, which to a large extent are premised on getting the PHC level coping with the majority of diseases, and in the process lessening the pressure on hospitals (Blas and Limbambala, 2001). This may improve technical efficiency by having health care services provided at appropriate levels and achieve effectiveness by responding to community needs. How then do referral issues feature in the health

reforms currently being implemented? The following section addresses this issue by reviewing the position of referrals in health reforms and the implications for referrals of the policy of explicit contracting.

3.24: Health sector reforms

Countries in Europe either follow a tax based Beveridge health system, which is based on universal coverage of all the population or the Bismark system, in which risks are covered by contributions deducted from income, with each sector of employment organising it's own insurance scheme . Today most Organisation of Economic Cooperation and Development (OECD) countries have achieved universal access to health care through a mix of public and private financing arrangements and providers. While the private sector is widely involved in the financing of health services of countries such as the USA, public financing of health services is the norm elsewhere in developed countries.

The dominance of the state in the financing and provision of health services was mirrored in the health systems at independence of countries in the south. The need to develop and expand national health services was especially pronounced in newly independent countries which sought to redress decades of extreme inequities in health service delivery. Thus, vast investments were made to expand health service delivery facilities. The resulting growth in health facilities increased access for most populations. However, the expansion of services was later to provide a basis for the emergence of an inefficient and unresponsive public health service. These inefficiencies became evident following the deterioration of third world economies, which found themselves increasingly unable to adequately finance public services, amidst growing populations with the inevitable result of deteriorating quality of health services.

Further, the expansion of health services, while designed to achieve improved access for whole populations, predominantly benefited urban dwellers. This arose partly out of colonial government policies that favoured urban areas and urban-biased development policies at independence. As a consequence, central and general hospitals in these countries absorbed approximately 30-50% of health sector expenditure; 50-60% of current government expenditure, 60-80 % of government national health facility expenditure and

possibly 70% of district-level health facility expenditure and around 60-80 percent of hospital expenditure (Mills, 1990). The management systems in most of the health sectors in LMICs, as a result came to be characterised by irrational utilisation of existing resources, fragmented implementation capacity, inadequate numbers and poor distribution of staff, chronic budget shortfalls (Mills, 1990; Segall, 2003), and excessive centralisation (Mills, 1990, 2002).

Such systems were evidently not sustainable and beginning in the nineteen eighties, emphasis shifted from across-the-board expansion of health services to a focus on low cost technologies to benefit the majority of the population. From the nineteen eighties, developing countries adopted the PHC model which recognised that much of the burden of disease in the developing countries could be addressed by minimum interventions, employing low cost technologies. The PHC model emphasised the role of the Government in achieving these tasks, and did not mention the private sector. The PHC campaign assumed active state involvement in both the financing and provision of health services, with the donor community being urged to provide contributions.

The decline in third world economies and limited fulfilment of aid from developed countries thwarted the attainment of the PHC goals. Commentators on PHC have criticised the approach for placing too much emphasis on the role of government and neglecting to recognise the private sector. The World Bank's *Investing in Health* (1993), focused on achieving efficiency, effectiveness, and equity in the provision of health care services. The most important departure from the PHC model was the use of market based approaches to resolving health issues. The private sector would be encouraged to grow, while simultaneously exposing the public sector to market influences and increasing the voice of consumers in the production of health services.

Ranging from African countries like Zambia, Uganda, and Kenya (Gilson L. and Mills A. 1995; Jeppson, 2003; Mwabu, 1995) the Caribbean (Mills, 2002) the Philippines (Bossert et al, 2003), to Eastern Europe (Struyk, 2002), reforms with varying emphasis of the roles of the public and private sectors in the provision of health services have been implemented.

Such policies, encapsulated under the "New Public Management" school, sought to revisit the role of the state in the provision of social services.

The policy changes that took place in the health sector were a microcosm of reforms in other hitherto government dominated areas such as water provision, maintenance of public housing, and marketing of agricultural products (Batley, 1997). The reforms were aimed at achieving the dual goals of inducing efficiency by increasing competition while retaining the well known equity advantages of the public sector. The poor economic performance and resultant social pressure enabled the absorption of external policy agendas on developing countries, and receptability among the population (Batley, 1997). The simultaneity in the timing of these reforms may reflect these underlying central pressures and/or the processes in lead reform countries may have provided a demonstration effect. As would be expected, the rationale and feasibility of applying market based reforms in developing countries has been questioned (Palmer, 2000; Broomberg, 1994; Chermochoscsky, 1995).

Although the poor economic situation in developing countries provided a basis for external pressure and acceptability to the population, the process was not without problems. Indeed, during the process of reform, both social and political resistance was recorded in many countries. Not only did civil servants openly resist the pace of reforms, but in subtle ways thwarted their implementation (Abrantes, 1999; Jeppson, 2003). Reform, by its very nature meant a reorientation of the ways of doing things and invariable loss of power, especially for officers occupying privileged positions in civil service work. To get around this problem, in some countries such as Zambia (Soeters, 1997) alternative implementation agencies were created in order to circumvent bureaucratic resistance. Elsewhere, reforms were suspended until reform minded governments were elected to office (Mills, 2002).

From the outset it was imperative to identify circumstances that could frustrate or smooth the reform process. This entailed education and orientation programmes with key players who were likely to be affected by the reforms. How fast the reforms moved in a large

measure became dependent on identification of agents of change, who would be relied upon to ensure the process remained on course. The role of such agents of change has been recorded in countries such as Zambia, South Africa (Gilson L. and Mills A. 1995); and Uganda (Jeppsson, 2003).

3.25: Conclusion

The review of literature on referrals shows that despite their pivotal role in health systems, there have not been many studies in this area. The dearth of such studies is especially marked in developing countries. An overview of the studies on referrals shows that these have largely concentrated on individual/community and frontline health provider perspectives. These studies illustrate dysfunctional referral systems and the urgency for reforms. The limited focus on institutional determinants of referrals highlights the urgency of carrying out such studies especially in view of the health sector reforms under which the role of various actors are being recast.

3.30: Reforming the health sector through the introduction of contracts

3.31: Introduction

This section of the chapter discusses the literature on the subject of internal contracts. The section begins by explaining the rationale behind opting for arms-length management of health services, which is facilitated by the introduction of internal contracts, and show cases countries in which such policies have been implemented. This leads to a discussion of the merits and demerits of introducing internal contracts, by drawing on the theoretical bodies of transaction cost economics and agency theories.

3.32: Contracting policies

As indicated in the section above, health reforms were part of a broader push to reorient the role of the state in the provision of services. Other than direct hierarchical management of public services, governments both in developed and developing countries were opting for an arms-length approach to health services management. This management orientation was based on market approaches for improving efficiency, ensuring equity and achieving consumer responsiveness to service provision. Contracting within the public sector through the creation of purchaser-provider splits and with the private sector became commonplace.

In the health sector, internal contracting and contracts with the private sector were undertaken in various countries. In some countries, the private sector was contracted to provide clinical and support services, for example in Bombay, Thailand, Papua New Guinea and Bangkok; and Zimbabwe and South Africa, respectively (Mills, 1998). In other cases such as the UK, Finland, Australia and New Zealand, contracting was introduced within the public sector, through the separation of health service purchasing and provision functions (McPake, et al, 2002, Manson, 1995).

In purchaser-provider splits, purchasers were expected to define health care requirements and identify opportunities for improving health status. They set priorities, developed specifications and contracted with providers for the delivery of health services. Providers

in turn delivered services against contracts or service agreements and were accountable to purchasers for the quality and quantity of services provided. Funders were a third element in the purchaser-provider relationship, and were responsible for obtaining and allocating funds to purchasers. To differing degrees, funders lay down policies and priorities, monitored purchaser performance and administered any regulations concerning purchaser-provider relationships. Purchaser-provider splits were often operationalised through the introduction of explicit contracts, under which service providers were commissioned.

Enthhoven is widely considered to be the architect of the UK internal market model, which was implemented during the Thatcher Government. Le Grand and Bartlettt (1993) have widely used the concept of internal markets. Le Grand and Bartlett observe that internal markets are markets because they replace monopolistic state providers with competitive independent ones; and were quasi because they differed from strictly conventional markets as a result of: the participation of non-profit organisations; centralised purchasing power; and representation of consumers by agents. Harden (1992) observed that an internal market has three interlocking aspects: the creation of incentives for greater efficiency; the delegation of decision-making responsibilities to lower levels; and the principal of money following patients. Boyet and Finlay (1995) defined an internal market as a market for public goods where the state ceases to be both provider and funder. According to Walsh (1995), an internal market involves three key features: separation of purchaser and provider; contract to link them, and the development of charging and accounting systems.

From these definitions of internal markets, it clear that whatever the emphasis, there are similarities for defining quasi markets: disengagement of the state from direct provision of services, retention of the funding role and assumption of a new role of regulation; appointment of agents; and involvement of the population. Reforms separating purchasing and provision functions were developed in various countries, prominent among which are New Zealand and the UK. In New Zealand, Health Regional Authorities were set up as purchasers of health services. In the first year, the purchasing

of secondary and tertiary health care entailed continuing the historical pattern with mainly public sector providers, which were transformed into Crown Health Enterprises, owned by the ministry of Crown Health Enterprises (Manson, 1995). In the UK, an internal health market was created through the separation of purchasers (District health authorities and GPFH) and service providers (GP, PHC, hospital and community trusts) (Cairns and Donaldson, 1994; Proppper, 1994).

Mason (1995) observed that the separation of purchasers and providers exposed the issue of accountability, where providers were expected to measure up to public expectations. In the UK, Australia, and New Zealand, the purchasers were quasi-autonomous organisations appointed and funded by central or state governments; and in Scandinavian countries such as Finland, accountability was exercised through local government. However, there are questions about the extent to which these arrangements ensure accountability. Frant (1996), observes that high powered political incentives may result in decisions which do not serve the broader public good, but political interests. While the introduction of internal contracts may counter high powered political incentives, such as were evident in the pre-NHS era (Propper, 1995), new governance systems may still be vulnerable to political opportunism. This is borne out by the experience in Zambia, where hospital boards perceived to be sympathetic to opposition political parties were dissolved (Blasé and Limbambala, 2002; Kamwanga, et al, 2001).

The purchaser-provider split model is premised on a set of assumptions: the market structure should be competitive or contestable; sufficient information for purchasers to make informed purchases; transaction costs should be low; motivation of providers should be partly financial; purchasers should be motivated to take consumer interests into account; and there should be no tendency to cream skim or dump (Le Grand, 1991). However, writers on internal markets have noted that competition is non-existent; monitoring roles introduce managements costs and are lacking in most countries; and payment systems may introduce perverse incentives (Manson, 1995; Smith, 1997; Broomberg). The precondition for the success of internal market while inadequate in developed countries are acutely absent in developing countries.

3.33: What are the benefits of internal contracts?

Improving services through market based pressures

Le Grand (1991) considered that the 1988/89 UK Acts in education, health care, personnel social services and public housing all had fundamental similarities, the introduction of quasi markets in the delivery of services. The basic premise on which these policies were based as has been shown above was that the state should disengage from the direct provision of services and concentrate on its role as financier, with provision of services being assigned to a commissioned body. Thus, through the separation of purchasing and provision functions, an internal market was created, which was expected to result in cost minimising behaviours. Where the private sector was contracted, it was hoped that benefits of private sector efficiency would be reaped. For quasi markets, created in the public sector, the benefits of competition were expected to induce managerial competence through the assignment of residual rights and redistribution of risks.

In a study on contracting in New Zealand, Ashton (1997) found that in response to questions about whether contracting had been beneficial, respondents observed that there had been an improvement in accountability, which had encouraged greater efficiency. Other perceived benefits included improved quality of rest home services and greater transparency of the cost of mental health services. In the case of rest homes, improved quality was associated with the monitoring process. Whereas, there is evidence from countries such as New Zealand that contracting, under the right conditions, could improve efficiency in the delivery of health services, authors have questioned the desirability of contracting in developing countries (Broomberg, 1994; Mills, 1996; Palmer, 2001). The limited level of contestability necessary for the creation of an internal market, limited capacities, pervasive patronage systems in the public sector are cited as factors that may impede contracting in the third world.

Clarifying purchasing and provision roles

One of the ways in which technical efficiency is expected to be achieved is through the clarification of purchasing and provision roles. In addition to the clarification of these roles, internal markets would also encourage adherence to plans and priorities; and improve monitoring and evaluation. With the delineation made explicit, purchasers could concentrate on shopping around for the most appropriate quality care at the best price while providers could concentrate on providing services at the least cost and/or highest quality (Howden-Chapman and Ashton, 1994; McCoy, 2000). However, there may be difficulties in separating purchasing and provision functions where a provider had been performing both functions, for instance in the case of palliative care (Clark, et al, 1995).

Being agents, purchasers were expected to act in the interest of communities. Where purchasers were not satisfied with providers' services, they would switch to others, reflecting consumer sovereignty (McCoy, 2000). In the NHS, the concept of money following the patient was expected to be achieved through provider competition, with fund-holders being free to contract with providers of their choice (Le Grand, 1993). While these expectations seemed rational, they failed to take account of the practical difficulties of consumers deciding whether it is the provider or purchaser responsible for failure; problems of estimating an individual's entitlement to public funding; purchaser difficulties in determining disease trends and hence service needs; risk of insuring small groups and the attendant management costs.

McPake et al (2002) noted that in studying outcomes of internal contracts in the health sector, the question is not necessarily whether to contract or not, but rather whether formalising implicit contracts between those who pay for and those who provide public services brings more advantages or disadvantages. One argument for explicitness is that formal contracts clarify purchaser's objectives and more clearly specify distinct roles for purchasers and providers. The dysfunctional health system in most developing countries is in part due to the lack of clarity regarding roles of various actors. Thus, contracting ought, at the very least, to improve the linkages in the health system. The problem of

ineffective referral health systems alluded to in the section on referrals could in part be attributed to blurred distinctions of purchaser and provider roles. Over a long time, much effort has been concentrated on improving the delivery of services at lower levels of the health system. During the PHC period and the initial stages of health reforms, the emphasis was on devolved units of health delivery, with scant attention being paid to the hospitals sector (Blas and Limbambala, 2001 and Bossert et al, 2003, Hanson, 2002).

Partly arising from this neglect of the hospital sector, an inefficient health delivery system developed, which was marked by bloated hospital costs and a broken down health care chain. In worse situations, hospitals increasingly provided PHC services, largely to urban populations, thus defeating the goal of ensuring equity of access. Through the explicit specification of purchaser and provider roles, the role of hospitals could be made more explicit and linkages between hospitals and other levels of health service provision improved. Such specification and delineation of roles could improve the efficiency of the sector, by pushing down costs. However, the imperative to achieve efficiency may be at the expense of attaining social goals of access. The equity questions that may accompany the achievement of technical efficiency ought to be considered (Howden-Chapman and Ashton, 1994). And this could be done through the explication of a social function, which specifies that the need for achieving efficiency should not compromise the poor' access to public health services.

Reduction of bureaucratic inefficiencies

Preker (2000) observed that public service delivery organisations had a propensity for capturing inordinate portions of the health sector budget, as well as influencing sector policy to their benefit, often against the public interest. In the health sector, provider organisations tried to gain advantages by affecting decisions on the distribution of resources or other benefits among providers. Such influence activities occur in all organisations, but countervailing forces were particularly weak in the public sector. Influence costs[11] were one of the most important costs of centralised control.

---

11 The tendency of provider organizations to expend efforts to effect decisions regarding the distribution of resources or other benefits among providers to their benefit. The costs associated with such activities can

The centralised management styles which were the norm in most developing countries accentuated influence costs. Highly entrenched bureaucrats participated in both the production and provision of services, with the result that inefficient and highly expensive services obtained. Evidence of such activities in the health sector was seen in the tendency to allocate resources to tertiary and curative care at the expense of primary, preventive and pubic health services (Gilson L. and Mills A. 1995; Mills, 1990). Incidents of influence costs have been recounted in the pre-NHS sector: more funding directed to hospitals which were located in marginal areas or staffed by powerful staff and the collusion of regional authorities and local hospital managers to manipulate central government directives (Propper, 1995). The activities of powerful groups in the health sector may effectively undermine the authority of new structures, as was recounted in New Zealand where managers by-passed regional offices and sought audience with the minister (Howden-Chapman and Ashton, 1994).

The behaviour of bureaucrats may either work to reinforce or minimise such influence costs. In the health sector, medical doctors often occupy influential positions and are able to bias the direction of policies in the sector. They not only choose the policy options to be pursued, but are also involved in implementation of the same, and thus lack the added advantage that may proceed from independent actors. It is precisely because of such conflicting roles, that the policy of splitting of purchasers and providers may help reduce the likelihood of influence costs and result in better allocation of resources, targeted at areas that address the health needs of a greater proportion of the population.

However, the extent to which the influence activities are attenuated is dependent on the interaction of interest groups. Politicians, voter and professional groups all have their own interests to serve and try to influence decisions. Where professional groups such as doctors' associations wield a lot of influence, coupled with politicians' desire for political visibilities, influence activities would be perpetuated. The resistance to health reforms reported above attests to such costs (Jeppson, 2003; Mwabu, 1995; Soeters, 1997).

---

be reduced by creating boundaries between the policy maker, the funder, and the provider. Source: *Preker, S.P., A.. Harding, P. Travis, 2000*

Increasing accountability to the population

With the delineation of service provision and purchasing made explicit, purchasers are expected to act in the interest of the population to source services that they need. Purchasers would do this by assessing the needs of the population, appraising options available for the delivery of services, selecting providers and monitoring delivery of these services (Clark, et al 1995). In order to represent communities, some means of harnessing community views have to be developed, which is usually through the appointment of health boards.

There is no ideal mechanism for representing community interests. Where there is more than one type of purchaser, as in the UK, equally varied bases for assessing needs would be used, for instance needs-based as contrasted with demand-led purchasing (Ham and Shapiro, 1995). Social functions are also critical determinants of the extent to which purchasers meet the population's needs. Ambiguities in defining what constitutes the social function complicates the work of purchasers, this being especially important in situations where board members have high local profiles and strong community networks (Ham and Shapiro, 1995).

3.34: What are the difficulties of internal contracts?

Direct management costs of contracting

The introduction of contracts in the place of centralised management has been associated with an increase in management costs on both the provider and purchaser sides. Studies on the management costs of contracting have observed that these tend to be especially acute during the initial contracting periods. Such administrative costs have been noted settings as varied as New Zealand (Ashton, 1997); South Africa (Palmer, 2001); and the UK (Le Grande and J Le Grande J. Mays N. and Nixon J, 1998). Studies on contracting in New Zealand, (Ashton, 1997; Howden-Chapman, 1994), have categorised the cost of contracting identified by respondents as consisting of staff time, accounting and legal fees, consultancy fees, and travel costs. The transitional cost such setting up of information systems and staff training were also experienced. The time spent in preparing and negotiating contracts was most commonly reported by providers as being

the most significant management cost. In the UK while the fund-holders observed that collecting information was desirable in order to act effectively act as purchasers they were also concerned at the accompanying increase in costs (G Williams, 1977).

Some calculations have been made of the costs of introducing and maintaining contracting. Walsh and Davis (1993, cited in Mills and Broomberg, 1998) estimated the costs of preparing for competitive tendering in the UK local government at 7.7 % of the annual contract value. They also found that the client costs of managing contracts were about 30% higher than the costs of managing the direct provision of service. The costs associated with contracting necessitate the development of information systems that could be used in checking undesirable behaviours among transacting parties. The difficulties of developing such systems have been recounted by various authors (Chernichovsky, 1995; Bennett Russell and Mills, 1999; Palmer, 2001). For instance, the new demands of contracting may exert additional demands on already out-stretched managers and in the worst situations redeploy medical staff away from provision of health services to administration, a real possibility as experienced in the NHS (Allen, 2002). While some evidence from places such as Lesotho, SA and Thailand suggest that contracting assisted government to overcome public service restriction, experience from other places such as Ghana, Tanzania, Thailand and Zimbabwe suggest that the public procurement process itself can became highly bureaucratic, undermining the potential efficiency of contracted providers (Bennett, Russell and Mills, 1999; Gilson et al, 1997). In many countries where contracting out has been implemented, there is very weak government capacity to monitor the performance of both for-profit and not-for-profit contractors (Mills 1995, Bennett, Russell and Mills, 1999; Gilson et al, 1997; Bennett and Mills, 1998).

The policy of explicit contracts is premised on the existence of a competitive or contestable market. It has been documented that while there was some competition on the provider side, this was not the case on the purchaser side, where the DHA dominated. The situation between the DHA and provider was one of bilateral monopoly, with one purchaser and a couple of providers (Le Grande J. Mays N. and Nixon J. 1998). Allen

(2002) observes that although there were a couple of providers, the local authorities perceived themselves to be in locked-in relationships with trusts. There were several reasons why the health authority behaved as if it had no alternative partners. The centrally dictated imperative of not destabilizing local trust was important. This phenomenon could be seen as the persistence of an older organizational culture, which predated the introduction of the internal market, as well as being an accurate reading of the many sometimes conflicting requirements of central government. Illife and Munro (2000) concluded that in reality the NHS internal market was not competitive management heavily outweighed competition – which meant paying for all the costs of competition, but getting little of the benefits.

Contracting and the problem of agency

Traditionally, principal-agent problems are pervasive in the health sector. The principal-agent problem arises when there exists between a principal and an agent, both asymmetry of information and a difference in incentives or objectives. Where asymmetry of information exists, agents may misreport their competence (adverse selection) or may mislead the principal about their level of effort (moral hazard). However, if the principal and agents' objective functions are in alignment, even in the face of information asymmetry, an optimal solution could be found since both have the same purpose. Similarly, where the objective functions are different, but there is no asymmetry of information, an optimal solution is still possible, since the principal would be able to ascertain whether an agent is behaving opportunistically or not. The problems of information asymmetries were highlighted in a study on GP fundholding (Williams et al; 1997), where it was observed that a key element in the contracting relationship is the ability for purchasers to be satisfied that they were receiving the service required at the level and quality specified in the contract. However, the information system in community health services did not enable them to be confident about whether they were getting value for money, nor was it possible to define outcomes for patients.

By bringing explicit contracts between contracting parties, additional PA relationships are introduced. The purchaser-provider split introduces an agency relationship between

purchasers as principals and providers as agents. After the first wave of reforms of the NHS in the UK, the DHA was expected to contract with any provider. It was originally assumed that there would be sufficient providers and some sort of provider competition would emerge (Butler, 1993). This, however did not happen, and the difficulties arising from there were compounded by the administrative difficulties regarding the requirement for annual renewal of contracts, which policy makers sought to resolve through opting for long term contracts (Dawson and Goddard, 1999; Goddard and Mannion, 1998), a trend that was observed in the New Zealand health sector as well (Ashton, 1997).

It was expected that long term contracts would through brining trust to the fore avoid some of the disruptive effects of short term contracts. It was argued that such long term contracts would encourage collaboration and effective sharing of information and avoid excessive transaction costs (Robinson and Le Grand, 1995). Dawson and Goddard (1999) and Allen (2002) comment on the extent to which contracts between Trusts and DHAs shifted over time towards relational contracts, involving long term, trust based relationships rather than competitively awarded spot contracts.

Goddard and Mannion (1998) noted that the move towards long term contracts and the emphasis on collaborative relationships may not represent a substantial change of direction for the NHS, but rather a continuation of a process, which had already been occurring because of the nature of the transactions between purchasers and providers in the market. While the advantages of long term contract such as enabling the parties to plan over a long term horizon are noted, there are some disadvantages such as the potential to encourage anti-competitive tendencies. As indicated above, with the tendency towards long term contracts, trust becomes an important aspect of the relationships between purchasers and providers. Goddard and Mannion (1998) identify three facets of trust which are important to understanding the difficulties of long term contracts: trust ranges from complete trust to complete distrust; trust is especially applicable to situations of ignorance or uncertainty about the known or unknowable actions of others; the concept of trust is also based on the expectation that an agent has sufficient freedom and predisposition to disappoint the principals' expectations. For trust

to be of relevance, the contracting parties must possess the freedom to choose whether to enter or not to enter into a relationship.

Beyond the direct relationship between purchasers and providers, external sources of PA problems may be identified. Starting from the higher level of government, one set of relationships is that between political groups, ranging from Ministers/Secretaries of Health to local political/community representatives. Clarity about PA relationships is important in managing these relationships. As was demonstrated in the section on reforms, consumers are increasingly being involved in the delivery of services, in part so as to improve PA relationships. To this end, structures such as health boards have been established in countries undergoing health reforms.

Given the myriad of PA relationships in the health sector, principals need to devise ways of bringing the action of agents in line with their expectations. The extent to which this is possible is dependent on: the nature of the service to be delivered; the principal-agent relationship; and the competence of the principals and agents (Batley, 1997). Where the service or product to be provided can be easily defined, it is much easier for the principal to hold the agent accountable for their actions. Services and products that are relatively easy to define make the process of information gathering for measuring performance much easier. Similarly, where assets employed in a transaction have value in alternative use, the hold-up costs are minimized since the provider can shift their production to a new purchaser.

The incentives of contract payment methods

Where explicit contracts have been introduced, this has gone in hand in hand with modifications to payment mechanisms, which send varying signals to purchasers and providers. There are three basic questions that need to be addressed when assessing the impact of contract payment systems: does the provider payment mechanism promote the right mix of provider incentives; are residual claims great enough to attract good providers and influence their behaviours; and does the public purchaser provide enough funding to influence provider behaviour (Slack and Savedoff, 2001). Just as important is

the need get the pricing right in order for signals to produce the appropriate mix of activities.

In the UK, providers are required to set prices for their services that are the same as cost, which gives them no incentive to promote innovative and perhaps cheaper services that might attract income and strengthen the provider organisation as a whole (Cairns, 1993). On the positive side, progressive changes in prescription and referral habits of GPs have been recorded. For instance it was documented that the proportion of generic prescriptions increased at a slower rate in fund-holders relative to non-fund-holders and prospective fund-holders who appeared to have significantly higher referral rates reduced these on gaining trust status (Gosden and Torgerson, 1997; Crump et al 1995).

The choice of payment method should make a trade-off between cream-skimming and cost reduction. In population-based/historical contracts, the provider is allocated a fixed amount of funds, based more or less loosely on the size of the population to be served. The provider bears the risk of any deficits but also keeps any surplus. This type of contract may provide an incentive for providers to shift costs to other providers or minimise on the amount of care accorded to patients. Under block payments, the whole service is purchased at a fixed price over a set of time. Block contracts may minimise risk and disruption for purchasers and providers but could militate against strategic changes that either side may wish to promote (Manson, 1995).

Failure to adopt effective payment methods may undermine some positive impacts of internal contracts. For instance, Williams (1997), observed that while internal contracts had led to desirable effects on GPFHs (such as more practice-based rather than hospital outpatient-based therapy services), it had been less successful in influencing community health services, mainly because of block contracts. In order to overcome some of the disadvantages of capitation systems, they can be adjusted for risk, as is the practice in some managed care arrangements in the US, for example for Medicaid patients; the reformed Dutch health system and in the health sector reforms in Columbia (Mills and Broomberg, 1998). Bartlett and Le Grande (1992) have noted the adverse effects of

block contracts to give the trusts both the incentive and opportunity to cream-skim and hence undermine equity objectives.

Alper (1994) expressed concern at the impact of the rapid growth of managed care on the primary physician who is expected to act as gate-keeper and, because the capitation system exposed them to financial risk. Alper's fear was that primary care would become less attractive for physicians and that there would be a steady decrease in the quality of primary care. It was further observed that there was evidence that the capitation contracts for PHC, which excluded hospital care encouraged a higher rate of referrals. In contrast, capitation methods which included hospital care provided an incentive to provide care at the lowest cost level – usually the primary care level.

Under service-based contracts with volume restriction, the providers are paid a fee per service, but the number of services to be performed is in some way restricted. The provider does not have to bear the risk for composition of services but does have to bear the risk that the rates per service which are agreed in advance will not cover the full costs. The provider is, therefore, focused on controlling costs, but mainly through keeping costs per unit of output below the preset fees. This contract type has another advantage in that the provider has no further incentive to induce demand beyond the specified volume limit and the public purchaser can anticipate and control the magnitude of expenditure. However, the level of detail required for service-based contracts is more than that required under block contracts, which introduced serious difficulties for providers.

Service-based contracts without volume restriction attract more perverse reactions than those based on volume restrictions. For instance in the USA, medical procedures and individual service volumes are costed and then paid for when they are delivered (Howden-Chapman, 1994). Under this system, providers are paid on the basis of diagnosis of the patient. With such a system, the definition for diagnoses is clearly important. Providers may be tempted to classify patients with minor ailments into more complicated diagnosis categories (the so called DRG-creep) with a prospective higher

payment rate. Reimbursement based contracts carry an additional risk to providers: as reimbursement systems concentrate on the direct patient costs, tertiary and teaching hospitals may lose out since the costs of research and teaching may not be covered (Kirkman-Liff, 1997). The risk of fee-for-service contracts to result in provider induced demand has been noted (Harden, 1992; Flynn, 1996).

Contract specification

As identified in the section reviewing theoretical perspectives, contracts are a preferred option for transactions where the nature of the service/good is such that significant costs would be incurred were the exchange to be conducted in the market. In order to hedge against hazards of transacting with a specific party as opposed to the open market, where long term relationships are not necessary, contracts should ideally be detailed, ex ante, by being elaborate and formulating all possible eventualities. Where contracts are so formulated, the chances of contract failure are minimised. The assumption that contracts would be elaborate enough as to cater for all future eventualities were the original expectations that marked the implementation of the NHS internal market in the UK. It was hoped that as the market evolved over time, complete contracts would become the norm. However, this expectation was not achieved and various commentators on the NHS have observed that the contracts were incomplete, highly idiosyncratic and regulated (Allen, 2002; Le Grand, 1994) an observation that had been made about South Africa too (Palmer, 2000). For one thing, the purchasers and providers did not have a choice about who they could contract with. They were from the beginning locked in historical relationships, which rather than ease over time, actually became stronger. It became apparent to policy makers that it was not possible to have classical contracts in the internal health market and the trend has since been towards relational contracting.

Walsh (1995) proposed two basic approaches to specifying the work to be done in a contract. The first states the outcome and leaves it up to the provider to determine how the work is to be done (ease for non-clinical, but less so for clinical services). The second states the methods to be used, for example a test to be done or even just the workload, for example number of procedures. Because of the difficulty of specifying outcome, Walsh

(1995) observes that contracts will generally be a mixture of method and performance. Indeed, recent research on contracts in the UK has highlighted that contracts are often broadly focused, informally worded, deliberately incomplete and reliant on informal mechanisms for dealing with disputes (Flynn and Williams 1997; Spurgeon et al 1997). They conforms more to what are termed "relational contracts" where the contract is less important than the relationship between the parties over time.

Similarly, studies on contracting in the developing world have identified a number of problems in the design, management and implementation of contracts which may help to explain the failure in some to generate efficiency gains. Firstly, many of the contracts appear to have arisen in an ad hoc, with little explicit justification or evaluation of their likely costs and benefits and they were often very vague (Kutzin 1995, Bennet, Russel and Mills 1996, Hospital Strategy Project Consortium 1996, Gilson et al 1997). This suggest that contracting in a developing country environment may have generally failed to live up to one of its objectives, that of clarification of organizational objectives and increased transparency of resources allocation through an explicit trading relationship between purchasers and providers (Bennet, Russel and Mills, 1996).

The effectiveness of the contracts had further been attenuated by the ineffectiveness of the rewards and penalties. In the UK, while a small number of fundholders had introduced a combination of incentive payments and penalty clauses into their contracts (mostly concerning the provision of specialized information by certain dates) the majority of fundholders did not wish to take their capacity for control in the contractual relationship to its logical conclusion – cancellation of contract. Rather they encouraged the relational contracting, where negotiation would govern their relationship as contracting parties.

Walsh (1995) makes a distinction between punishment-based and co-operative contractual approaches. The former assumes that client and contractor have different interests, and each seeks to exploit the other. Sanctions are required to discourage the contractor from failing to deliver. A co-operative contract assumes that the two parties

have interest in common, and that events outside the contractors control are just as likely to affect contract performance.

Transaction attributes and contracting difficulties

The policy environment in which the policy of explicit contracts is implemented has a large bearing on how successful it is likely to be. For instance in the UK NHS, while a competitive environment was envisaged from the inception of contracting, this was attenuated overtime, with policy makers emphasizing cooperation between purchasers and providers. The originally commercial orientation of the reforms was diluted with more mild policy statements taking prominence: buyer became purchaser and then commissioners; seller became providers; budgets became funds; and marketing became needs assessment (Butler, J 1993). Although the government was originally not expected to be overtly involved in the health sector, the Department of Health maintained limits on capital expenditure, where they set external financing limits and regulated prices (Bartlett, W and Le Grande, 1994; Allen, 2002), and urged purchasers and providers to ensure a smooth take-off (Newchurch, 1993). Talking about the political environment, Anand (1995) observed that as in other health systems based on the need to ensure responsiveness to consumer needs, accountability in the NHS tended to be of an internal, hierarchical, ex post nature, whereas the prevailing ideology of patient choice emphasizes user involvement in the decision-making process. Similarly political influences have been registered in other settings where similar reforms have been attempted, for instance New Zealand (Phillipa Howde-chapman and Ashton, 1994).

The myriad of non market influences was further manifested through members with powerful positions in the old organisational structure holding powerful positions in the new organisations. Because governments are concerned with both equity and efficiency, providers and purchasers were subjected to a range of regulations, policy guidelines and monitoring arrangements (Phillipa Howde-chapman and Ashton, 1994). For instance since government allocates resources in regulated markets, residual income is arbitrary, and lack of residual income means incentives to be efficient are weak (Propper, C, 1995). And to the extent that government funds providers, it also retains a monitoring role,

which, however, it is not able to discharge effectively and agents are likely to respond to controls and monitoring by reducing outputs of the non-monitored aspects. Because of such difficulties, Propper (1995) suggests that competition could be encouraged where this is possible and regulation supported where competition is unlikely.

Because of the difficulties of replicating competitive market conditions, which has been observed by various authors (Palmer, 2000; Broomberg, 1994; Bennet et al, 1999), suggestion have been made regarding the use of market proxies. Such proxies for market conditions include voice, exit and loyalty, which are expected to exact similar responses by increasing the voice of consumers, threatening switching to alternative providers and relying on public loyalties to safeguard transactions.

Contracting comes with a gradual evolution in the autonomy of contracting parties, ideally away from centralised management towards greater autonomy. How much autonomy is accorded reflects the environment in which these policy changes are taking place and also shows how keen the policy makers are on realising the stated policy changes. Slack and Savedoff (2001) have suggested a continuum of indicators for classifying degrees of autonomy: the decision rights; market exposure; residual claim over revenue; accountability; and social functions.

Studies assessing control over inputs have illustrated the difficulties that providers and purchasers face in dealing with inputs that are centrally controlled. This is especially a problem with respect to control over labour inputs. The reform implementation problems recounted in the section on health reforms are in part explained by the limited control of contracting agencies over labour inputs. The problem of staff scarcities and institutional rigidities such as permanent employment conditions in reform settings has been acknowledged (Larbi, 1998; Bartly, 1997; Goddard and Mannion, 1998). Controls on revenue generation range from caps on how much returns can be earned on capital goods to restriction on the kinds of fees that can be levied.

Although the restriction on revenue generation may be taken to be interference with autonomous units, this could be justified such intervention serves to temper managerial objectives, which may be at the expense of social goals. The need to safeguard social needs, however, should be weighed against the necessity of giving managers enough autonomy to carry out their delegated mandate. Where social functions are explicitly stated and funded, there will be less confusion for providers. However, social functions are often left ambiguous and can be a serious source of confusion. What exactly constitutes a social function and the mechanisms used to carry this through, are subjects of debate and lead to varying principal-agent problems.

The level of completeness of a contract is in part dependent on the characteristic of the service being contracted for. Because of the inherent difficulties of specifying and measuring health services, health service contracts tend to usually be incomplete. These difficulties are compounded by the myriad of factors which influence health outcomes and are beyond the ambit of the sector. Writers on internal contracts have highlighted such specification difficulties in the health sector (Allen, 2002; Ashton, 1997), which difficulties may in turn outweigh the expected gains from the policy of internal contracts (Bartlett, 1991; Dawson and Goddard, 1999; Roberts, 1993; Howden-Chapman and Ashton, 1994). Allen (2002) in a study on contracting of nursing services showed that the economic characteristics of nursing services were such that it was not possible to fully specify or to monitor them completely. District nursing services were a complex product, which consisted of a wide range of continuing activities, as opposed to a single intervention. This was compounded by the fact there was a moderate degree of uncertainty about the future. Furthermore, despite the fact that district nurses could in fact have been redeployed in a variety of other health care settings, it was found that the providers believed that the human assets employed in delivering services were specific to the transactions with their current purchasers, and could not be re-deployed elsewhere. Writing about mental health services, Lien (2003) acknowledged specification difficulties, exemplified by the difficulties of anticipating the frequency of demand for such services.

Partly arising from specification difficulties in the health sector, contracting parties can only act as well as the information they have allows them to. Where it is not in the interests of the contracting parties to willfully share such information, and in the worse situation, when one part actively distorts information to their advantage, there will be serious contracting problems. Allen (1997) in a study on internal contracts in the health sector illustrated the problems of service specification, which arose out of information asymmetries between purchasers and providers of health services. Interviews with purchasing staff revealed that they did not know what was going on inside the purchaser trusts. District Health Authorities were of the view that trusts acted opportunistically through taking advantage of the health authorities' lack of detailed knowledge of the trusts' activities.

3.36: Conclusion

Either explicitly or implicitly, various countries have instituted health reforms to improve efficiency, equity and ensure responsiveness to consumers. Contracting within the public sector through the creation of purchaser-provider splits is becoming commonplace. The supposed benefits of internal contracts include: improving services through the use of market based pressures; clarifying purchaser/provider roles; reduction of bureaucratic inefficiencies; and increasing accountability to the public. The extent to which the expected outcomes are realised, however, has to be judged against the difficulties of contracting such as direct management costs, perverse incentives of contract payment methods, agency problems and transaction costs.

Chapter 4.00: Analytical framework, aim, objectives and methods of the study

4.10: Introduction

This chapter combines the analytical framework and research methods that were used in the study. From the review of the theoretical and empirical literature on referrals and contracting, it was evident that in order to study referrals within the contracting framework, "incentive structures" and how they influenced referrals would be central. The analytical framework below outlines the interaction of environmental factors, transaction attributes, incentive structures, and rewards and penalties and their impact on contract outcomes. This is followed by a discussion of the aims, objectives and methods of the study. The chapter ends with a commentary on the quality of data.

4.20: Analytical framework

The analytical framework presented below uses insights from transaction cost economics and the principal-agent theory to trace contracting outcomes arising from the interaction of environmental factors, transaction attributes, incentive structures, and rewards and penalties.

4.21: Environmental factors

For purposes of this study, the environment factors which were deemed to be critical for assessing the difficulties of contracting were: the spatial distribution and ownership of health facilities, and capacity of health facilities to deliver services. Attention was directed at exploring the differences between NGO and public hospitals and to a lesser extent on upgraded and non-upgraded hospitals.

4.22: Incentive structures

Principal-agent analysis was performed by analysing four categories of actors and how they related to one another: districts, hospitals, frontline providers; and communities.

The principal-agent relationships were identified by assessing the flow of funds in the health sector and from interviews with respondents. From the identified principal-agent relationships, incentive structures and their impact on referrals were determined. There were three broad incentive structures identified: the financial incentives that arose from the contract payment mechanism; managerial incentives faced by both districts and hospitals; and social incentives to which the providers responded.

4.23: Transaction attributes

The key transaction attributes that would pose difficulties for the public sector are human asset specificities and behavioural attributes of bounded rationality and opportunism. Human asset specificities related to staff shortages and management difficulties. Scarcities of providers were explored in the context of upstream contracts with the CBOH, while staff management problems were analysed in the context of downstream contracts between districts/hospitals and frontline health providers.

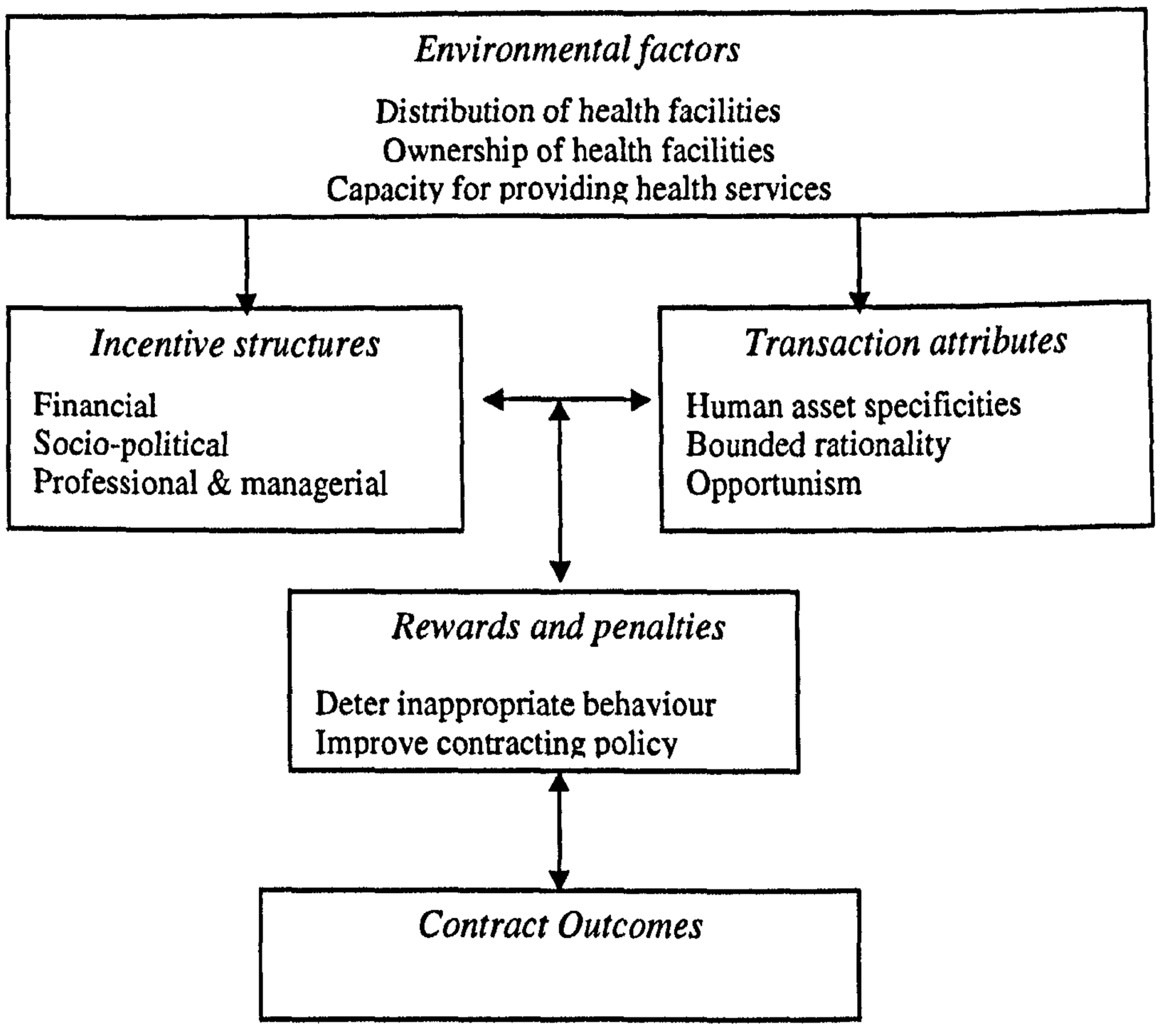
4.24: Rewards and penalties

While the introduction of explicit policies is expected to impact on the delivery of services by recasting the role of the actors in an internal market, sometimes the expected outcomes do not materialise because of the lack/limited effects of reward and penalty systems. Such systems could be used to enhance the effectiveness of contracting through for instance ensuring the appropriateness of referrals between districts to hospitals.

4.25: Contract Outcomes

Deriving from the interplay of environmental factors, contract/transaction attributes, principal-agent relationships, incentive structures and rewards and penalties are a myriad of contract difficulties. Such contract difficulties may be reflected in problems regarding the mobilization and use of inputs, and costs for monitoring the process and outputs of a contract.

Figure 4.1: Analytical framework for the study



4.30: Aim and objectives of the study

4.31: Aim of the study

The aim of the study was to analyse the nature and difficulties of contracting between district health boards and referral hospitals in Zambia, using referrals as a tracer. With the aid of insights from New Institutional Economics, the study sought to explain the process and difficulties of contracting, patterns and levels of referrals by studying the interaction of environmental, contracting/transaction factors, principal-agent relationships, incentive structures, and contract difficulties.

4.32: General objectives

A: Describe the arrangements for managing referrals between districts and hospitals and assess how this has changed.

B: Assess the levels and patterns of referrals under varying contracting environments.

C: Explore the incentive structures facing districts and hospitals and how these explain the levels and patterns of referrals.

Specific objectives under general objective A.

A1. Describe the transaction environment and contracting difficulties between districts and referral hospitals.

A2. Describe the type of contracts between districts and referral hospitals before and after the health reforms.

A3. Assess the views of districts, hospitals and policy makers on the policy of contracting.

Specific objectives under general objective B.

B1. Assess the levels and patterns of referrals between districts and hospitals

B2. Determine the differences in referral levels and patterns under varying contract settings

Specific objectives under general objective C.

C1. Assess how the referral making process is supposed to work and how it works.

C2. Explore the incentive structures facing districts and hospitals and how these impact on referrals

Hypothesis 1: Locked –in relationships between DHBs and RHBs will lead to contract difficulties.

A thematic analysis of the data was carried out, from which the most pronounced contracting problems between districts and hospitals were identified and examined by type of respondent, and type of contract.

Hypothesis 2: Referrals are likely to be more appropriate under contracts with public hospitals than NGO hospitals.

The hypotheses were tested using empirical data on referrals between districts and referral hospitals. The appropriateness of referrals was tested using expert opinion based , which was supplemented by the testing of differences in various indicator of illness severity using two tracer conditions of pneumonia and malaria.

4.40: Selection of study sites

The study sites were selected on the basis of varying referral policies (Table 4.1). A case study approach was adopted where hospitals with specified referral policies were purposively selected. The University Teaching Hospital, was selected on account of the health centre upgrading programme, while Ndola CH and Kitwe CH were included as control sites which did not have health centre upgrading programmes. Monze mission hospital was included in order to gauge the issues surrounding contracts with NGOs hospitals.

The UTH is located in Lusaka Urban district, which is the capital city of Zambia. Although the hospital was supposed to be the national referral hospital, it in effect acted as a district hospital, since the district did not have a first level referral hospital. The hospital had had to grapple with the problem of excessive demand for its services. As a consequence of this, various initiatives had been undertaken to address the problem. These initiatives included upgrading of health centres, which was expected to rationalise referrals to the hospital. However, instead of alleviating congestion at hospital, the upgrading of health centres was observed to have led to an increase in the uptake of services at health centres and no change in hospital level utilisation, a reflection of previous unmet need (Atkinson, 1999). At the time of data collection for this study, Lusaka DHB and UTH managers had entered into an agreement where the hospital OPD was turned into a HAHC, which was managed by the district.

After UTH, Ndola and Kitwe CHs are the next biggest hospitals in the country, which cater for the Copperbelt region. Both are third level referral hospitals offering health services to districts on the Copperbelt province. Like the UTH, both NCH and KCH are located in districts which do not have district hospitals. Unlike UTH, however, there was no upgrading of health centres in the two districts, thus making a good case for comparing with UTH, where health centres had been upgraded. A rural hospital, Monze mission hospital located in the Southern province was included in order to illustrate the difficulties of contracting with a mission hospital located in a rural setting.

Table 4.1: List of hospital and district study sites by pertinent referral rationalisation policy and type of hospital ownership

Referral hospitals	District Health Board	Pertinent referral rationalisation policy	Hospital ownership
University Teaching Hospital	Lusaka urban Kafue	Upgrading of health centres By-pass fees	Public
Ndola Central Hospital	Ndola Masaiti	No upgrading of health centres One-off suspension of by-pass fees	Public
Kitwe Central Hospital	Kitwe Kalulushi	No upgrading of health centres By-pass fees	Public
Monze General Hospital	Monze Mazabuka	Hospital affiliated health centre By-pass fee	NGO

4.50: Qualitative data collection methods

In order to understand the process and difficulties of contracting between DHBs and RHBs, the study used qualitative methods. Qualitative methods allow researchers to study the complex social settings of their subjects. These methods have been widely used in health services research and in health economics research, where their value has been recognised (Coast 1999). Coast (1999) observes that health economics has the opportunity to draw on innovative cross disciplinary ways of working and there is the potential to consider researching particular questions in what are generally considered to be unconventional ways by using qualitative methods. Qualitative research can be about persons' lives, stories, behaviour, and also about organisational functioning, social movements or interactional relationships (Strauss and Corbin, 1990). Contractual relationships fall into this latter set of possible research subjects. A number of researchers studying contracting in the health sector have used qualitative research methods, using case-studies (Allen, 2000; Palmer, 2001; Broomberg, 1994).

There are arguments for and against the use of case studies. The use of case studies is often criticised on the basis that they are less amenable to generalisations. In general, case studies are a preferred strategy when "how" or "why" questions are being posed, when the investigator has little control over the events and when focus is on a contemporary phenomenon with some real life context (Yin, 1994). Although case studies have been criticised for lacking powers of generalisability, Seale (1983) observes that the criticism about qualitative methods lacking powers of generalisability arises from the common assumption that the only valid basis for making inferences is that which has been developed in relation to statistical analysis. However, case studies need to be selected for explanatory powers rather than their typicality as there is no attempt to seek generalisability from a case study method. The basis of theoretical generalisation lies in logic rather than generalisability (Seale 1999) and not typicality and must be looked for in the social context rather than in the case (Mitchell 1983).

As Palmer (2001) observed, although the case study approach has been widely used by researchers in the health sector, one ought to keep the limitations in mind and aim at minimising their influence. Such limitations include the researcher's biases, loose application of the term case, and its bounded nature, which favours containment, control and causality rather than the complexity and dynamism of the real world (Yin, 1994). These shortcomings notwithstanding, case studies can provide stories to illustrate particular social contexts. Lincoln and Guba (1985) observe some of the key advantages of case-studies as being: validating and building upon the tacit knowledge that an investigator brings to inquiry; allowing for purposive sampling; incorporating the notion that the focus of the design can be adjusted as the process unfolds and issues of particular interest are identified.

Where researchers have used more than one case study, the intention is not to achieve representativeness, but rather broaden understanding of the phenomenon under study. The rationale for having more than one case is what Yin terms "replication logic" rather than a "sampling logic". A replication logic seeks to find similar results between case studies (literal replication) or different results for predictable reasons (theoretical

replication). In replication logic, theoretical replication takes place when different results are observed for predictable reasons, by relating the case study to a theoretical framework, which analyses it differently and therefore would predict results from the different cases chosen. Replication of results across sites helps to ensure that findings are not due to characteristics of particular sites, hence it increases external validity (Keen and Packwoood 1999, quoted in Palmer, 2001) or analytical generalisability if not statistical generalisability (Walsh, et al 1997, quoted in Palmer, 2001).

As identified above, a number of researchers on contracting (Allen, 2000; Palmer, 2001; Broomberg, 1994) have used case studies. They have collected data through record reviews and in-depth interviews (Ashton, 1994; Palmer, 2001; Broomberg, 1994). In addition, Allen (2000) used direct observation techniques. Direct observation enables a researcher to study the setting of meetings between contracting parties and get data, which could not be collected using the other methods. Almost all the researchers have supplemented their methods with repeat visits to study sites, where follow up meetings were held in order to follow up on leads as they developed during the course of data collection.

Similarly, this study used a case-study approach to investigate the process and difficulties of contracting between DHBs and RHBs in Zambia. Four case studies of contracting under different referral policies were chosen not for the purpose of increasing the representativeness of the sample, but for theoretical replication purposes. This facilitated a better understanding of contracting under the different referral policy settings. The research aimed to contribute to knowledge on contracting in the health sector by providing information on the process in a developing world setting. To generate the data needed for meeting the study objectives, in-depth interviews were held with policy makers, district and hospital managers/directors, and frontline health providers. Policy documents on contracting/referrals and minutes of meetings between DHBs and RHBs were reviewed in order to augment the data obtained from interviews.

4.41: Interviews with policy makers, managers and directors

Part of the qualitative data were collected through interviews with policy makers from the CBOH and MOH (Table 4.4). Similarly, interviews were held with District Health and Referral Hospital managers and/or directors. Data collected from these sources were further augmented with data from minutes of meetings between district boards and referral hospitals, where these could be accessed. The following section details each data collection method that was used in the study.

Table 4.2: Methods of data collection/processing, aspects of contractual relationship assessed and role of author in the data collection/process and analysis

Method of study	Aspect of contractual relationship method was assessing	Data collection and analysis
Semi-structured interviews with MOH/CBOH officials	Views about contracting and referral policies, Perceptions about contracting, Perceptions about referrals, prospects and problems,	Author
Semi-structured interviews with district managers/ directors	Perceptions about contracting, Experiences with referrals, prospects and problems.	Author
Semi-structured interviews With hospital managers/ Directors	Perceptions about contracting, Experiences with referrals, prospects and problems	Author
Semi-structured interviews with hospital and health centre staff	Knowledge and experience with process of making referrals	Author
Document review	Identification of issues on relationship between DHBs and RHBs.	Author
Collection of hospital outpatient data	Determine referral rates, disaggregated for chosen diseases/health conditions	Clinical officers engaged for the study and supervised by author
Collection of hospitals in-patient data	Determine appropriateness of referrals to hospital.	Clinical officers engaged for study and jointly supervised by Author clinician
Validation of data from hospital patient records	To improve quality of expert-opinion based assessment of referral appropriateness.	Clinician engaged for the study and supervised by author.

4.42: Interviews with Policy Makers

In-depth interviews were held with policy makers from the CBOH and MOH. The interviews were aimed at finding out the policy regarding contracting in general and specifically the policies and programmes on referrals between district health facilities and referral hospitals. The following policy makers were interviewed: Director, Planning and Development, MOH; Co-ordinator, Contracting, CBOH; and Specialist, Clinical Services, CBOH.

4.43: Interviews with District and Referral Hospital Managers/Directors

At the district and hospital level, interviews were held with managers and/or directors. District and hospital managers and/or directors were asked to explain how their relationship with hospitals had evolved over time, with specific reference to the changes that explicit contracting had introduced following the health reforms. Respondents were asked to identify issues of contention that had arisen between districts and hospitals, how such cases arose and how they were resolved. They were also asked about referrals, the changes in managing them, how they had been affected by explicit contracting and strategies that had been implemented to rationalise patient flows from district health facilities to referral hospitals.

5.44: Interviews with hospital and health centre providers

For each hospital, interviews were held with one frontline provider who dealt with referral cases. For participating districts, a listing of health centres was constructed, from which a purposive sample of one third of the health centers was drawn. The health centers which were chosen were those which were perceived by DHBs to be heavy referrers. Within the selected health centers, one frontline provider involved in making referral decisions was interviewed. The respondents were asked to state what they were expected to do and what they did when making referrals. The identified individuals were also asked to outline how factors causing inappropriate referrals could be minimized while those encouraging appropriate referrals could be encouraged.

Table 4.3: Sources of qualitative data for the study

Category	Institution	Interviewees and number	
		Interviewee	Number
Policy Makers	CBOH/MOH	Director of Development & Planning, MOH. Specialist, Clinical Services, CBOH. Co-ordinator, Contracting, CBOH.	3
Referral Hospital Directors/Managers	Hospital Management Board	Managers/Directors from four Hospital Management Boards	5
District Directors/Managers	Referral Hospital Management Board	Managers/Directors from eight District Health Boards	8
Frontline providers	Hospitals and District Health Centres	Doctors/Clinical Officers/Nurses from one third of each district's health centres and all hospitals.	48

Table 4.4: Total number of adult malaria and childhood-pneumonia cases reviewed, by hospital study site

Study site by tracer condition	Number of patient records reviewed	
	Total	Referred
University Teaching Hopital		
Malaria in adults	239	121
Pneumonia in children	702	679
Kitwe Central Hospital		
Malaria in adults	367	309
Pneumonia in children	34	34
Ndola Central Hospital		
Malaria in adults	430	280
Pneumonia in children	-	-
Monze Mission Hospital		
Malaria in adults	249	186
Pneumonia in children	145	135
Grand total		
Malaria in adults	1185	896
Pneumonia in children	881	848

4.43: Review of policy documents and minutes

A review of policy documents was carried out aimed at understanding the policy environment on contracting/referral policies. Furthermore, at each district or hospital, minutes of meetings between districts and hospitals and copies of contracts were collected and studied. After the minutes were studied, issues needing further elucidation were taken up with either district or hospital managers.

4.50: Quantitative data collection methods

4.51: Secondary data collection from hospitals OPD and patient records

Quantitative data were collected from routine hospital utilisation and inpatient data, which were used to calculate referral rates for six diseases/health conditions (Table 4.3). The data for this were collected from the hospital OPD registers which were kept at the hospitals. The data were disaggregated to show the number of cases that were referred by district health facilities and those that were self-referred. These data enabled the calculation of referral rates.

Additional quantitative data, using two tracer conditions of malaria in adults and pneumonia in children were collected, which were used to assess referral appropriateness. The data were collected for a three-month period (January to March, 2003). Given the vast distances among the study sites, one clinical officer was engaged to collect data at each of the hospitals. The data were then reviewed by one independent clinician in order to validate the expert opinion-based assessment of referral appropriateness.

4.52: Referral rates and appropriateness

As indicated above, in order to calculate referral rates, data on referrals were obtained from hospital OPD registers. The data on referrals collected for six diseases/ health conditions: malaria, Respiratory Track Infections (RTI), diarrhoea, tuberculosis (TB),

Aids Related Complexes (ARC) and anaemia[12]. The total number of referrals were then computed by disease/health condition, from which referral rates were calculated. All the other diseases/health conditions were lumped together under an 'others' category.

This method of calculating referral rates was deemed to be suitable for Zambia, on both practical and technical grounds. Hospitals keep OPD registers, from which referral data can be derived. A referred patient is given a referral letter, which they present at the hospital and their particulars are entered in the OPD register. The register captures both referred and non-referred clients, by diagnosis. From this register, calculations can be made of the total number of referrals by diagnosis.

Simple calculations of referral rates though crude are an important indicator of how a health system is functioning and may provide indication of resource use in the health sector. Studies focussing on referral systems have ranged from a concern with high referral rates (Atkinson, 1999; Sanders, 19988); differences within the same system (Earwicker, 1998) to low referral rates (Font, 2002; Ohara, 1998). An a-priori identification of the direction of the problem is therefore a good starting point in investigations of referral systems.

There are varied reasons advanced for variations in referral rates. Newton (1992) provided a useful guide to factors that may explain variations in referral rates. He broke these into two broad classes: clinical and non-clinical. The clinical factors were further subdivided into: episode specific (management options, judgement of risk, degree of clinical uncertainty, symptom-related, long term management, GP/specialist communication, and time-related); and background (lack of specialist option, GP attitude, medical history, and public health/resource concerns). The non-clinical explanations were also broken into two classes: episode specific (GP needs, patient feelings, patient attitudes, and GP-patient communication); and background

---

12 The diseases/health conditions chosen were among the top ten contributors of DALYS. In a properly functioning health system and according to the BPC (MOH, 2000) most of these diseases/ conditions would not be expected to be presented at high referral hospital level. Thus a high level of referral at such hospitals would indicate a dysfunctional referral system.

(administrative, workload, psychological background, GP patient relationship, GP specialist relationship, GP characteristics and financial/legal factors).

As indicated above, referral rates are a useful indicator of how a health system is functioning. To understand the reasons for the observed referral rate differences, investigations into clinical and non-clinical factors, involving policy makers, managers, providers and consumers would have to be undertaken. Studies on referral rates in isolation do not convey much. They only become meaningful when they are studied alongside referral appropriateness.

The WHO (1987) has observed that PHC cannot work unless there is effective hospital support to deal with referred patients, and to refer patients who do not require the hospitals' attention back to other primary care services. Dysfunctional referral systems characterise much of the health systems in developing countries. Paradoxically there is a dearth of studies on referral systems in these countries (Font, et al, 2002).

In the few countries where studies of referral systems were conducted, these used secondary sources of data from health service providers. Assessments of referral rates/hospital utilisation were done using hospital utilisation data (Atkinson, 1999; Oharah, et al, 1998) while referral/admission appropriateness had been assessed using tracers (Murray, et al, 2001; Font et al, 2002; Sanders, et al, 1998; Liu and Mills, 1999). Respiratory infections were used to measure referral appropriateness in Zimbabwe and unnecessary care in China (Liu and Mills, 1999; Sanders, et al 1998). In addition to RTI, malaria was also used in the Zimbambwe study. A study on referrals in Tanzania used general paediatric conditions to assess referral rates and appropriateness (Font, 2002).

Patient record reviews were used in assessments of referral appropriateness in settings as diverse as Honduras (Ohara, et al, 1998); Zambia (Murray, et. al. 2001; Atkinson, et al 1999), Tanzania (Font, et al, 2002). Liu and Mills (1999) used patient reviews to assess the extent of unnecessary care in China. These studies all focussed on specific

diseases/health conditions for which detailed data were collected to assess appropriateness of referrals/care provision.

There are two approaches to the measurement of unnecessary care/inappropriate referrals, implicit and explicit methods. In the former, clinicians review the entire patient record and make a summary judgement about the appropriateness of referral/necessity of care. The validity of the results from this method depends entirely on the knowledge, skill and judgement of reviewers. The major weakness with this method is the high likelihood of discordance among the reviewers.

In the explicit method, a set of criteria for judging what referral or care is unnecessary has to be developed. The major advantages of this method are that the results have better validity and the possibility that patient records can be reviewed by non-physicians. However, the explicit method is expensive to administer. Furthermore, developing a set of criteria for determining appropriateness may not be easy.

This study used tracers of malaria in adults and pneumonia in children to assess the appropriateness of referrals. The study adopted a hybrid of the two methods for assessing referral appropriateness. The use of objective indicator-based methods supplemented and added rigour[13] to the assessment of referral appropriateness, which would not have been achieved with a sole expert-opinion-based method.

4.60: Methods of Analyses

4.61: Qualitative data analysis

The analysis of qualitative data was carried out at two levels: at the preliminary stage during the data collection and transcription processes, where themes were identified and

---

13 Two important characteristics possessed by useful classification schemes are validity and reliability. Validity is the extent to which differences in scores on a measure instrument reflect true differences with respect to the characteristics one seeks to measure. Reliability refers to consistence over time (Horn and Horn, 1986). Whereas expert opinion may be biased, temperature readings for both malaria and pneumonia reflect the extent (ensuring validity) of the condition and such readings taken at different times for the same condition would be similar (achieving reliability).

arranged in analyses matrices. The matrices were developed and elaborated as the data collection and transcription process proceeded. At this preliminary stage of data analysis, the data were treated as empirical indicators. This allowed the listing of all possible themes/codes as they were reflected in the data. There were three broad matrices developed for analysing: the differences in difficulties of contracting between districts and hospitals, which were generic to all types of contracts; findings on the difficulties of contracts and referrals, segregated by the type of contract; and findings on the capacity, views and experiences of frontline providers.

The analysis matrix of generic findings on the contract difficulties was subdivided into areas of agreement and disagreement between districts and hospitals. This allowed the probing of specific issues identified from data and thus permitted a process of simultaneous data collection and analysis. The second broad analysis matrix, in addition to showing common findings was disaggregated by the type of contracting environment (more attention was paid to the differences between NGO versus public hospitals, and to a lesser extent districts with upgraded versus those without upgraded health centres). The comparison allowed for the comparison of differences in contract difficulties that arose from peculiarities of the contract settings. The last set of analysis matrices showed findings on the capacity, views and experiences of frontline providers, contrasted by type of contract.

The main themes which guided the matrices were: environmental factors, the difficulties of internal contracts; the employment and management difficulties of providers in both district and hospital facilities, the benefits and problems introduced by internal contracts, general problems with referrals between districts and hospitals; and frontline providers' capacity, knowledge and experience with referral decision making. Table 4.5 below shows the generic form of the analysis matrices (the full set of matrices are included in Appendices 9-12).

Table 4.5: Format of analysis matrices on the difficulties and experiences of referrals and internal contracts.

Contracting aspect	Public versus NGO contracts
Views on internal contracts policy Environmental factors Transaction/contracting factors Incentive/sanctions structures Referral policies and practices The management of referrals Source of referral problems Solution of referral problems Referral strategies Views on referral strategies	Contrasts of findings between public and NGO contracts Contrasts in views of DHB and RHBs Contrast in views/experiences of frontline providers and managers
	Findings common to upgraded and non-upgraded hospitals Findings common to contracts with public and NGO hospitals

After the preliminary analysis, the second stage of analysis involved couching the findings within the analytical framework. The was done by subjecting the literal findings to a critical appraisal, through constantly asking how the findings could be explained using the analytical framework: environmental context; the contracting/transaction attributes; principal agent relationships and incentive structures; and how these affected the outcome of referral contracts. For purposes of this study, the environment factors which were deemed to be critical for assessing the difficulties of contracting were: the spatial distribution and ownership of health facilities, and capacity of health facilities to deliver services.

For transaction attributes, the key factors which were considered were human asset specificities and behavioural attributes of bounded rationality and opportunism.. Scarcities of health providers were explored in the context of upstream contracts with the CBOH, while staff management problems were analysed in the context of downstream contracts between districts/hospitals and frontline health providers.

Contracting in essence means dealing with principal-agent problems and finding ways of resolving these. From the first level analysis, the study showed that referral problems could be traced to three interfaces: district/hospital; district/frontline providers; and

frontline health provider/communities. The three interfaces were analysed in principal-agent terms by studying the underlying incentive structures.

The interaction of environmental factors, contracting/transaction attributes, principal-agent relationships, and incentive structures on the outcome of contracts was illustrated with a presentation of levels and patterns of referrals against the forms of contracts included in the study.

4.62: Quantitative data analysis

From the data collected from hospital OPD registers, the levels of referrals were estimated using aggregated hospital utilisation data. The referral rates were estimated by dividing the total number of referred cases by the grand total of hospital attendances. The patterns of referrals were determined by showing the relative contribution of selected diseases/health conditions to morbidity, in relation to the corresponding DALYS profile of the same diseases/health conditions.

The assessment of referral appropriateness used two approaches, the subjective expert-opinion based method and the objective indicator-based method. In the expert-opinion based method, clinical officers reviewed records, filled in questionnaires and made assessments about referral appropriateness, which were validated by a second medical expert review. The reviewers used data on condition of patients before and during presentation to the hospital to assess the appropriateness of each referral. The criteria used for gauging appropriateness can be broadly grouped into: whether an illnesses responded to initial lines of treatment at the health centre; whether the available diagnostic and management resources at the health centre were adequate for dealing with the condition; and condition-specific indicators of illness severity.

For both pneumonia and malaria cases, referrals were deemed to be appropriate where a patient had not recovered after initial lines of medication. For malaria cases, the initial lines of treatment often included: chloroquine, halphan and/or fancidar, while for pneumonia, they included critaphen, amoxil and septrin. The availability of medical

requisites and management skills were also considered, for instance in the case of complicated malaria cases such as meningitis. Various condition-specific indicators were also used to gauge the appropriateness of referral, with temperature being a commonly used yardstick.

The expert-opinion based assessment was supplemented with objective-indicator based assessments. The chi square test of association was then used to test if there was relationship between the types of contracts and the levels of appropriateness given by the various indicators. The objective-indicator based method included:

1. Proportion of cases admitted=number of revealed cases which were admitted.
2. The time taken for the temperature to normalise after admission to hospitals
3. Survival status of admitted patients=proportion of admitted patients who died

4.70: Commentary on the quality of data

The first steps to ensure quality of the data were taken at the pre-testing stage, where the instruments were tested and data collectors trained. The pre-testing exercise enabled re-designing of the instruments. To ensure consistency in the method of data collection, all the qualitative data were collected by the author, in a tape-recorded format, which was subsequently transcribed and verbatim copies used for analysis. The transcribed data were further proof read, to not only get an in-depth knowledge of the subject but also aid in coding and preliminary analysis. This helped the process of open coding, which entailed taking the data as empirical indicators. In this way, all the major themes/codes of the data were captured.

The process of collecting data for estimating referral levels and appropriateness in a setting of poor record keeping is imbued with numerous problems, which if not addressed could compromise the quality of the data. In studies of this kind, which use routine hospital data, numerous problems are expected. For one, locating and finding the data can be a difficulty. In almost all the hospitals even after the records had been identified, finding useful data from the same was not easy. Hence the final number of records reviewed was always less than the total identified. Close supervision of

recorders as they reviewed records was done in order to ensure that the recording was exhaustive and uniform. In two cases, because of divergence in the manner the data were entered, the whole record review process was redone.

As already indicated above, assessing the appropriateness of referrals through expert opinion is subjective. One way of improving the validity is to subject the reviews to a panel of experts, and judgement passed on the basis of majority rule. While this improves the validity of the data collected, it is not full-proof, and as Earwicker (1998) has observed since each referral is a result of a decision made by a single and particular provider, it is impossible to assess how other providers might have reacted had they been confronted by that particular decision. If it were to be based on observational data, a completely fair comparison would require the impossible – that the same patient consult every doctor.

Given the weakness of solely relying on expert-opinion based determination of referral appropriateness, a combination of validated subjective expert-opinion-based and objective indicator-based methods were adopted for the study. In the first instance, data from patient records are recorded on designed forms and an initial opinion reached about the appropriateness of each referral. Subsequently, the recorded data were given to another reviewer who gave an independent opinion on appropriateness. For an objective indicator-based classification of referral appropriateness, various methods were used which supplemented the opinion-based assessment.

4.80: Conclusion

The combination of qualitative and quantitative methods facilitated studying the process and difficulties of contracting between district health boards and referral hospitals. Despite the many initiatives that have been undertaken to harmonise links within the sector and address the issue of referrals between DHBs and RHBs, there has been no analysis of the institutional setting in which these programmes/policies have been tried. This study attempted to fill this gap by not only analysing the institutional setting, but also relating this to outcome variables of referral levels and patterns.

The study analysed the nature and difficulties of contracting between district health boards and referral hospitals in Zambia, using referrals as a tracer of that relationship. The study used a case study approach, in which four hospitals and eight districts were purposively selected. Multiple sources of data were used: in-depth interviews with policy makers and district/hospital managers/directors and providers involved in making referral decisions in health centres.

Quantitative data on referrals was obtained from hospital registers and patient records. Since calculation of referral rates and appropriateness indicators was based on secondary data, strategies were taken to improve the quality of the data. This was done by subjecting the opinion-based decisions on referral appropriateness to a second expert view. The opinion based assessment was supplemented with objective-indicator based tests for determining appropriateness.

Chapter 5.00: The introduction of explicit contracts between districts and referral hospitals

5.10: Introduction

This chapter of the results section presents findings on the policy of explicit contracts between districts and referral hospitals. The chapter starts with an outline of the environmental context, under which the spatial distribution and ownership of health facilities are discussed. This leads to a discussion of the transaction/contracting context, which focuses on: the nature of contracts, provider autonomy, transaction attributes and problems of human resource scarcities and management difficulties. Thereafter the district and hospital respondents' views on the value of explicit contracts are illustrated, after which a comparison of contracting with NGO and public hospitals is made.

5.20: The contracting environment

5.21: District and hospital autonomy

At the time of the study, the hospitals were run as autonomous facilities, while health centres were managed under autonomous DHBs. Prior to the introduction of DHBs, local authorities managed health centres, while referral hospitals were managed by the MOH through the PMO. With the introduction of the health reforms, the management of local health facilities was delegated to the DHBs, while referral hospitals became the responsibility of autonomous hospital boards. Districts were responsible for the provision of primary and first level referral health services, while autonomous hospitals were charged with the provision of specialised referral services. Where the districts lacked the capacity to provide first level referral services, they could contract with autonomous hospitals for such services.

Although both DHBs and RHBs were autonomous and could contract with any district/hospital, they were restricted by spatial/historical circumstances to contracting with specific parties. The hospitals covered by the study were all owned by the

government, except for one NGO facility. The contracts between districts and hospitals were based on historical and geographical circumstances, whereby districts contracted with hospitals that were in close proximity. In some rural/peri urban settings, however, districts had the choice of contracting with both public and NGO hospitals. Although such districts contracted with both government and NGO hospitals, they were more likely to report satisfaction with the services provided by NGO than public hospitals. Given a choice, such districts would have preferred to contract exclusively with NGO hospitals, buy they were tied to specific hospitals on account of spatial factors, which predetermined the hospitals which communities could utilise with limited difficulty. For instance, the UTH, despite being a national referral hospital effectively acted as a district hospital for the surrounding areas and had limited utilization from other parts of the country. The situation was the same with other districts, where contracts were drawn with the local and surrounding districts.

Although the devolved district and hospital management units were supposed to run as autonomous entities, managers complained that their decision making space was limited. The boards for both districts and hospitals were appointed by the minister of health, who retained his/her influence over their functions. In terms of financial freedom, although the boards were free to introduce fees, such were expected to be ratified by the local authorities. There were restrictions on how the money raised from user fees could be utilized. While hospitals could utilize all the money for their local needs, DHBs were allowed to use up to 80% of such resources. The mode of payment of hospital grants through the districts compounded the financial woes of the former, since districts had the upper-hand in determining how much to give hospitals.

The granting of autonomous status to districts and hospitals was marked by the passing of the Health Services Act, under which boards were introduced in both districts and hospitals. In mission hospitals, which had a longer tradition of boards, government and mission appointed boards operated side by side. In addition to overseeing the operations of provider management units, the boards were supposed to act as a venue for representing community interests. However, there was debate about the effectiveness

with which the boards were able to do this. One consistent argument against the operation of boards was that they were more likely to serve political than social interests. However, the risk of high powered political influences ought to be weighed against the risks of managerialism. During the study, managers talked about how they desired to have more freedom. Much as managerial freedom may be beneficial, where it enhances autonomy, there is a risk of unbridled managerialism, which ought to be tempered with political intercession. One way in which managerialism presented difficulties was evidenced from the deployment of medical staff from clinical to administrative roles. Given a choice, doctors preferred occupying management positions, which attracted benefits such as access to vehicles, attending workshops and the accompanying financial incentives. Where such perverse incentives were manifest, boards could be used to protect the social good against the negative effects of managerialism.

5.22: The specification of contracts

As was indicated in the introduction, the MOH commissions the CBOH to provide services to the population. The CBOH in turn contracts both district and hospital boards to provide services on their behalf. The contracts between the CBOH and the DHB/RHBs reflect the range of services that providers are expected to provide in turn for funding. The contracts indicate the obligations of the CBOH, which are: commitment to provide funds to the providers; provision of guidelines and standards for the provision of services; and provision of technical assistance and backstopping services. The service providers, in turn are expected to: provide health promotion , preventive and curative services commensurate with their level of competency; and support services to lower level health service providers. The contracts include indicators and targets that the providers are expected to observe, such as ceilings on expenditure, and health service utilisation. The health service targets are further subdivided into: medical fees and collection; health service utilization and availability of medical supplies.

The contracts stipulate sanctions for the non-attainment of targets. They state that the release of funds is conditional on the submission by the DHB/RHBs of timely, quarterly, satisfactory financial and progress reports and that expenditures are in accordance with

approved plans, budgets and ceilings. In the event of unsatisfactory financial and/or progress reporting, the CBOH may stop the transfer of all funds. And in the case of persistent failure of the boards to honour their contractual obligations, the CBOH may take over the functions of the boards after consultation with the Minister of Health. While the contracts formally identify the sanctions that could be imposed on both RHBs and DHBs, respondents observed that this had never been invoked, and was only meant as a guide to the boards. Similarly, the providers had latitude with respect to varying expenditure lines, so long as such were justified.

Table 5.1: Characteristics of the transaction environment and delineation of health service provision roles between districts and hospitals

Transaction environment and delineation of roles	Some key findings
Transaction environment: -Spatial distribution of hospitals and district health facilities. -Split of ownership between Government and NGO sectors. -Capacity of district facilities and hospitals to provide health facilities	-DHBs and RHBs contracted along historical lines. All the districts around the UTH, that is Chibombo, Lusaka rural and urban, Kafue, and chongwe districts contracted with the UTH. -Districts around Ndola contracted with Ndola CH, those in Kitwe with Kitwe and likewise those around Monze. -Weak financial position meant that DHBs and RHBs were hardly able to employ staff on board conditions. -According to the health services act, both public and NGO providers were governed by the MOH through the CBOH. -The districts had weak provider capacity, which resulted in a low quality of services, and consequently increased pressures for hospital services.
Delineation of health service roles: -Clarification of service provision boundaries among various providers. -Capacity of providers. -Clarification of 1st and 2nd & 3rd level referral services.	-Health reforms emphasised clarification of roles in provision of health services between districts and hospitals. -Development of the BPC was supposed to guide the delineation of health service provision. -However, overlaps in the provision of services were still common. -Delineation of service provision roles had been undermined by: -limited district/hospital capacity to provide services -limited capacity of frontline providers

When talking about the ceilings, a respondent from the CBOH said "*....the ceilings are there to guide how they [providers] should use the resources. They are not punishment, per se, if they go beyond or they spend under, but we expect them to mention why they have spent more on this level and less on the other level. For example, if they have an epidemic, definitely they will be expected to spend more money to fight that epidemic. ...they are not a hindrance as such, but merely a guide* [CBOH respondent].

The contracts between the CBOH and districts and hospitals served the purpose of formalising the relationships and were not accompanied by an effective system of sanctions that could be applied in the case of failure by either districts or hospitals. The nominal value of contracts was also reflected in the downstream contracts between districts and hospitals, which were closely modelled along the upstream contract formats. There were hardly any attempts to have detailed contracts. While the limited specification of the contracts between districts and hospitals may be positive in the sense that it encouraged a flexible relationship between them, there was a risk of such open contracts introducing difficulties, as will be discussed in detail below.

5.23: The delineation of service provision roles

As was indicated in the literature review section, the introduction of internal contracts is premised on the expectation that such a policy would improve efficiency by recasting the roles of various players involved in a transaction. Thus districts would concentrate on the provision of PHC and first level referral services, while the hospital providers focus on higher-level referral services. Such a delineation of responsibilities would improve service provision through the avoidance of overlaps.

The introduction of internal contracts in the Zambian health sector was marked with the delineation of service provision at various service provision levels. The policy clarified the separation through: the payment of referral grants to districts, phasing out hospital OPDs and their replacement in some cases with HAHCs, and cessation of health promotion services by NGO hospitals. To recast, inappropriate referrals were one of the major causes and manifestations of inefficiencies in the health sector, which necessitated

the implementation of reforms. The delineation of service provision functions among providers was supposed to contribute towards the resolution of such inefficiencies.

According to the health financing policy, which is detailed in the introduction section, DHBs were responsible for managing and providing primary and first level referral services, while RHBs managed and provided 2nd and 3rd level referral services. While the policy explicitly outlined the range of services that were supposed to be provided by districts and hospitals, there was often a discrepancy between what was expected and delivered. Inappropriate referrals in part arose from this discrepancy in service provision. The dysfunctional referral system was further illustrated by weak links between health centres and hospitals. Effective management of a referral system would entail that cases deserving referral are appropriately and timely assessed and referred to the appropriate higher level. After a referral is received, the referral institution should refer back to the sending institution for continuation of care, where this is needed.

As was indicated above, although the national referral hospital was supposed to provide specialised level referral services, it effectively operated as a hospital for the local district and the surrounding areas. A respondent from the hospital said: *...[the national referral hospital] is supposed to be a tertiary hospital or a national hospital where we expect referrals to come from provincial hospitals. But unfortunately because of the circumstances surrounding it, it has been forced to function at all levels: first level, second level and tertiary level.*

5.30: The transaction difficulties

The literature on contracting identified two classes of factors that cause transaction difficulties: the behaviour of the transacting parties and transaction attributes of the service or good. The behavioural characteristics of bounded rationality and opportunism are important in understanding difficulties of contracting. For purposes of this study, the most relevant transaction attributes were human resource scarcities and health provider staff management difficulties. The study revealed that both districts and hospitals faced

such difficulties. A summary of the study findings on the health provider scarcities and management difficulties is shown in Table 5.3 below.

5.31: The scarcities and difficulties of managing providers

The study showed that both districts and hospitals faced difficulties with regard to the recruitment, retention and management of health providers. Not only was the number of health providers limited, most of them belonged to the PSC, which posed human resources management difficulties such as the inability to control transfer of staff between hospitals and districts. The rules for disciplining a PSC employee were so elaborate that managers of both RHB and DHB felt frustrated and did not bother to initiate disciplinary procedures involving such staff. The combination of scarcities of clinical personnel and personnel management difficulties, coupled with health service delivery constraints resulted in low provider capacity to deliver health services.

The staffing problems were especially pronounced at the national referral hospital, which had multiple employee categories. This had created problems such as differences in conditions of service for the various categories of staff: MOH, MOE, and the CBOH. The UTH manager recounted how changes in the conditions of service for one category of staff had a demonstration effect on others and difficulties of ensuring providers observed the same working hours: "*...we find it difficult to manage them. Even as regarding working hours, because we have [more] control over our own staff than we [have over] UNZA [University of Zambia, employees who fall under the Ministry of Education] employees, because they are answerable to their own administration...*" (Hospital manager).

The centralised employment of staff for both hospitals and districts had created difficulties of managing transfers between the two. The study found that there were movements of staff from the hospitals to the districts, which created staff deficiencies in the hospitals. Further probes around this issue revealed that staff were attracted to transfer from hospitals to districts by the training opportunities under the latter. To this end, the hospitals had had meetings with DHBs, where the matter was discussed and resolved that such transfers be managed in a manner which did not disrupt the operations

of health facilities. One way would have been to ensure a fair distribution of training opportunities in districts and hospitals..

Both RHB and DHB managers observed that the health reforms had generated new administrative roles, which required specialized skills. However, owing to the limited funding at the disposal of both districts and hospitals, they faced difficulties in finding and engaging the required personnel. The limited number of staff and inability of boards to recruit and retain staff with specialised skills had resulted in perverse effects where medical doctors were redeployed from clinical to administrative roles.

Contributing to the debate on the utilisation of medical doctors by DHBs, a hospital manager observed, "*...[simple medical conditions] can be dealt with by the district...I believe they have doctor X, there is doctor Y, who is manager, planning. Now these doctors can actually engage in clinical activities...*" A respondent from the district acknowledged the problems regarding the utilization of doctors: "*...unfortunately the doctors that we have are involved in management....[initially they were involved in clinical work], but it was difficult, the time they are supposed to be in the clinic, there is an urgent meeting [and they have to leave for the meeting]...*"

Table 5.2: The transaction difficulties between district and hospital contracts

Transaction attributes	Some key findings
Difficulties of employing providers. Difficulties of managing providers.	-There are major staff problems, especially the scarcity of doctors and clinical officers. -The management of PSC staff posed difficulties for both district and hospital management. -Because of the limited control over PSC staff, hospitals recounted problems of staff moving from hospitals to DHBs. -Staff management problems were compounded in situations where there were multiple employee categories. -RHBs accused DHBs of making unnecessary referrals. RHBs further observed that the DHBs were not able to effectively monitor the activities of staff in their health facilities.

To the extent that referral problems were primarily attributed to the limited number of health provides, the policy of explicit contracts may exacerbate these by introducing administrative responsibilities, which would lead to the redeployment of staff away from clinical work. Both districts and hospitals experienced scarcities of skilled staff. In some cases, districts had attempted to resolve this problem by approaching students at colleges, who were offered scholarships, and in turn bonded to the sponsoring institutions. Further, both RHBs and DHBs observed that they had tried to solve the problem of staff shortages by allowing moonlighting. "*...we allow what we call moonlighting [meaning overtime] sometimes.....say for instance somebody is on night off and that clinic has a critical shortage, somebody says, I would want to do moonlighting. So, we allow maybe a clinical officer or a nurse to go and cover the area that has a shortage, then we pay them something...[DHB respondent]*".

A manager at a DHB recounted that they were planning to employ clinical officers who would be released after the closure of the hospital OPD. The urgency of employing clinical officers was however, tempered with fears of unionism, for which clinical officers were renowned: "*...we have fewer clinical officers, and I think this is the problem that is haunting the whole country...we had gone to Chainama [college for clinical officers] to persuade the graduates to join us... Ndola Central [hospital] are trying to close OPD, they are trying to see if we can get clinical officers from Ndola Central [hospital] so that they can man our clinics. Our fear is that most of these clinical officers are involved in union matters and [when] you get one, you may have problems...*" (DHB manager). As indicated above, the limited number of clinical staff in both districts and hospitals had accentuated the practice of clinical roles being performed by less qualified staff, which negatively impacted on the referral decision-making process.

5.32: Manifestations of opportunism

The behavioural attributes on which transaction cost economics is centred are bounded rationality and opportunism. Opportunism for districts manifested in relation to referrals decision making and corresponding referral grants. For hospitals, it manifested in the

care provided to referred patients, and provision of feedback to referring health centres. Both districts and hospitals had limited means for assessing and verifying the actions of the other party. The manifestation of opportunism and impact on referrals are discussed in detail in the subsequent chapters 6 and 7, which address the incentive structures facing districts and hospitals.

Referral decision making

Hospitals were of the view that districts made unnecessary referrals, because they wanted to shift costs to the hospitals or did not monitor the activities of frontline health providers. While the hospitals may have been justified in claiming that districts made unnecessary referrals, they were not able to back their claims. The districts on their part observed that the health centres had limited capacity and as such were not able to provide most of the basic health services. Districts, which did not have upgraded health centres observed that they did not have adequate facilities to enable them provide quality services. The scarcity of providers and limited diagnostic and management facilities resulted in referral pressures on the hospital. While acknowledging these limitations, districts noted that there were cases of frontline providers making inappropriate referrals. The districts had tried to resolve the problem through the holding of clinical meetings and rotation of doctors in health centres, whose impact was limited because of the gross provider inadequacies.

On their party, the DHBs observed that the hospitals also exhibited opportunistic behaviours by not providing the requisite care for referred patients most of whom, they claimed, were often discharged without having been adequately attended to at hospitals. The districts were not able to ascertain the condition of discharged patients since they did not receive feed-back information from hospitals. Hospitals countered by observing that they had limited staff and therefore could not be expected to provide feed-back for all referred cases. The hospital were further accused of charging referred patients, who according to the health financing policy were not supposed to pay.

Payments for referrals

As outlined in the introduction chapter, DHBs could spend between 20-40 percent of their grants on the purchase of hospital beds. In all the cases studied, DHBs kept to the lower end of the range, while hospitals preferred a higher proportion. While the hospitals consistently argued that the grants from DHBs were inadequate, the latter countered by observing that the overall grants that they received from the CBOH were limited. When deciding on how much of their grant to give the hospitals, the DHBs were limited by the low overall grant and the multiplicity of other financial needs. Invariably, they gave priority to meeting their immediate needs over paying for referral services. This situation was made worse by the lack of a method for relating the referral grant to the related hospital workload, which both DHBs and RHBs were mindful of. *The hospitals were not able to demonstrate the extent of inappropriate referrals. They RHBs did not have the capacity for collating and analysing such data and hence were unable to demonstrate the level of referral appropriateness, let alone the associated costs.*

Table 5.3: Summary of findings on manifestations of opportunism between district and hospitals

Opportunism and bounded rationality	Some key findings
Bounded rationality: -Extent to which districts attempted to rationalise referrals. -Extent to which hospitals provided appropriate care for referred cases.	-RHBs accused DHBs of making unnecessary referrals, which arose as result of: cost shifting behaviours by districts, and inappropriate frontline provider practices
Opportunism: -Tendency of districts to make inappropriate referrals. -Tendency of hospitals to provide minimal care. -Extent to which hospitals provided feedback to districts.	-DHBs accused RHBs of cost shifting behaviours through paying limited attention to referred cases -DHB accused hospitals of not providing requisite care for referred patients -DHBs accused RHBs of not providing feedback information for referred patients.
Information limitations: -Lack of information to assess referral appropriateness -Lack of information for districts to assess outcome of referred cases.	-The cost of collating and analysing information made it difficult to rationalise referrals -District used hospital lack of information to their advantage.

5.40: Views on the policy of explicit contracts

The literature on contracting illustrated the value of explicit contracts to be: clarifying the distinction between funders, purchasers and providers; the appointment of boards/commissions to oversee management and represent social interests; granting of autonomy to providers; reduction of bureaucratic inefficiencies; and allowing purchasers to buy goods/services that consumers want at low price/best quality. This section discusses the views of both district and hospital managers on the value of explicit contracts in the health sector, which are summarised in Table 5.5 below.

5.41: Contracts are assurance for grant provision and check on resource use

The relationships among the CBOH, districts and hospitals were formalised through contracts. Both DHBs and RHBs signed contracts with the CBOH and between themselves for the delivery of health services. The format of contracts between the DHBs and RHBs were standard and drawn along the lines of upstream contracts with the CBOH. They indicated the range of referral services that were expected to be provided by hospitals, the number of beds purchased by DHBs and the percentage of the DHB grant that would be remitted to hospitals. The DHBs decided the number of beds to purchase and negotiated with hospitals on the corresponding grant for such beds. Both DHB and RHB managers observed that the introduction of explicit contracts had some advantages. The contracts, the respondents observed served an assurance role that grants would be remitted to providers, "*...because we have budgeted, the contracts assist us in following up our outlined activities. But if we didn't have the contract, it means we were not going to have any money, but as it is now we have money in form of an action plan. It might not be there now, but we know it is coming. ...so when the money comes you are able to apportion that money. ..but if we didn't have this contract, it was going to be extremely difficult...*(DHB respondent).

A respondent from a DHB observed that contracts also helped in rationalizing the use of resources. In response to a question on whether contracts had made a difference, the respondent said *"... I think so, before I think it was not very apparent, or it was not pressing, because perhaps the Government at that time had resources. So every health*

centre, every hospital had facilities, manpower, expatriate doctors, nursing staff, equipment, and the buildings had just been erected- they were okay. But as the problem of scarce resources [became acute], we had to make sure that we use the little resources that [were] available optimally. And therefore, there is no way the district, for example, could have all its patients going to the hospital, hence the congestion, we had to provide services at lower levels. So a lot of clients are trapped there... it is expected that very few filter to the higher levels. Otherwise, it doesn't make economic sense to have a surgeon treating malaria, when that's something that can be treated at a health post or even in the community. So that's how this contracting came in, to ensure that the right services are provided at the right levels and by so doing, we [rationalise the utilisation of] the limited resources that we have....

Furthermore, the respondents from hospitals observed that the contracts enabled them to keep track of the people utilising their services, since patients were required to present referral notes at the hospital. In the words of one hospital manager "*we are able to catch those who are not referred...those who do not have referral letters*". Contributing his views on the value of explicit contracts, a DHB manager said: "*...I would say the contracts have led to improvements, because that time [before explicit contracts] patients used to find it very difficult to go to the hospital. But now the community know that the district pays something to the hospital and they know that if I went to the [hospital, without passing through a health centre], I will pay, so when they get the referral [letter], they will not pay...they are treated as DHMT [DHB] patients. So there has been tremendous improvement in terms of patients accessing the health services at the hospital...*"

5.42: Contracts improve interaction between districts and hospitals

A respondent from a district observed that with contracts, they were able engage mor with the hospitals, unlike in the past when they were not able to do this. "..... *I think, there has been a difference because now [with] contracting, it means the district is able to give an input to the hospital. Because without the contract, its like the district just provides the services, they don't buy any beds in the hospitals and the hospital just gets money for second-level services.*

Table 5.4: Summary of respondents' views about the value of explicit contracts

Contracting attributes	Some key findings
-Value of explicit contracts. -Contract payment method. -Delineation of responsibilities.	-Both DHBs and RHBs observed that limited funding had negatively impacted on their ability to provide services. -RHBs insisted on higher end of 20-40% range for purchase of hospital beds. -With contracts, there was a guarantee that funding would be provided, though there could be delays. -Explicit contracts ensured that providers strove to achieve targets as reflected in action plans. -Through the delineation of services, DHBs knew what services they were supposed to provide. -Contracts enabled RHBs and DHBs to meet and discuss referral issues. -Contracts acted as a control mechanism for access to hospitals -Without contracts, there would have been no restriction in accessing hospitals.

Being purchasers of hospital services, districts observed that contracting had helped them to hold the hospitals accountable. One way in which this was done was through meetings with the hospitals, which were held frequently. Adding positive comments regarding the value of contracts, a DHB respondent observed: "*...[contracts] have made things easier, because we have a say. Because we want to see that they [hospitals] provide the required first level services [meaning first level referral services] to our patients that are sent there, and because we are funding them for that purpose it [enables us to know how].. issues are run. If we are not happy, we sit with our colleagues [at the hospital] and say these are the complaints from the people. [For instance] when we started user fees, you know a person pays user fees at the health centre and referred to the hospital and is also made to pay, we sat down and resolved the issue..*"

While the introduction of explicit contracts had resulted in some positive outcomes as indicated above, they were also marked with difficulties, which attenuated their effectiveness, such as: the limited funding to both districts and hospitals; perverse incentives regarding the utilisation of health providers; the lack of effective sanctions and

rewards; and provider scarcities and difficulties of managing providers. These difficulties are discussed below.

5.43: Contracting was attenuated by funding difficulties

While the respondents appreciated the advantages of explicit contracts, they also acknowledged that there were shortcomings, especially regarding the level and patterns of funding. For RHBs, the financial difficulties were compounded by the low referral grants from the DHBs. While hospitals consistently argued that the grants from DHBs were inadequate, the latter countered by observing that the overall grants that they received from the CBOH were low. As outlined above, DHBs could spend between 20-40 percent of their grants on the purchase of hospital beds. In all the cases studied, DHBs kept to the lower end of the range, while hospitals preferred a higher proportion. By paying a lower proportion of the grant for referral services, the DHB would retain more funding to themselves, while the same would apply for RHBs if they managed to get higher referral grants.

Contributing to the difficulties faced by hospitals, CBOH/MOH interviewees noted that districts arbitrarily decided how much they would pay hospitals. "…. *So some of them [districts] the way they are doing it, they just arrive at arbitrary figures. I think they need to sit and plan. ... Okay we have the population of so much, how many of our population need first-level services or if they review case records at the hospital and see how many of those were attended to in the previous year? How many of them were really first level patients? How many were second level patients? And then since [it's] the district's responsibility to fund first-level services, in those district where there is no first-level hospital and they have to contract a hospital, they should work it out on the basis of the population and what percentages they think are first-level. Now they are doing it like "Okay we will give you 10% of our grant or we will give you 20% of our grant. Such that in some cases you find that the hospitals are losing out. They attend to so many first-level cases, and yet what the districts contributes to first-level services is not enough".* (MOH/CBOH respondent). A policy maker from the CBOH had this to say: "*... Because the districts are the ones who are giving to the hospitals, they are*

usually reluctant to give a bigger percentage. So it really has to be a hospital, which is powerful, with a lot of bargaining power to convince the districts to release most of the funds. If you have weak management in a hospital who can't fight it out, that hospital ends up getting very little from the district...".

Being the purchasers of referral services, DHBs had an upperhand in determining how much they would pay the hospitals. While the contracts for referral services were flexible and supposed to give contracting parties latitude for negotiations, DHBs capitalized on their position as purchasers. Although both DHBs and RHBs observed that it was necessary to have a formula that would link referral grants to the corresponding hospital workload, they were also mindful of the difficulties of doing this. They talked about this in very general terms and were short on details regarding how it could be done. In one instance, where a district had attempted to devise such a formula, they abandoned the idea after they realized that by relating the grant to the corresponding referral workload, they would pay the hospital more than they currently were.

Respondents from the hospital had strong views about the low grants from districts. They contended that districts paid them very little, while the workload was high. One such respondent said:"...*I do agree the surrounding districts purchase beds per month, which is meant for first level care and second level. I am not sure about second level care. I do not think we are getting funding for second level care. For first level care, we get a certain percentage from the districts ...which is funded to do the first level type of care, but we only get less than 40% of that money to do the first level functions at [the hospital]. So, it is very difficult to appreciate really how much the [policy of] contracting services is helping as far as financing the hospital is concerned. The way we see it is that [the hospital] should be handled as it is....as first level as well as for second level care ...for such services because we know it's a fact that the surrounding districts hardly provide first level health care and second level care...".*

5.44: Contracting was attenuated by lack of effective sanctions and rewards

Some respondents suggested that the contracts should include sanctions against opportunistic tendencies. However, other respondents were conscious of the importance of leaving contracts open-ended, and flexible. "*...the contract has got its [weaknesses]. When you go into issues of contracts, in other words you are saying you must [do as required by the contract] or there will be sanctions. ...I have never heard of a district that has been penalised by the CBOH because it failed to perform. .. We always work things out and agree that things have got to move in that way...*" (DHB respondent).

While it was desirable to have contracts based on trust and goodwill, the relationship between districts and hospitals was marked by distrust. The absence of trust between districts and hospitals was compounded by the lack of knowledge by both districts and hospitals to ascertain the level of effort that the other party had put in to ensure successful contracts. The hospitals did not have much information on whether the districts had done all they could to achieve appropriate referral practices by providers under their remit. The DHBs on the other hand were not sure whether frontline providers had done all they could to achieve appropriate referral practices. The districts further did not know whether the hospitals had done the best they could do to provide quality health services for referred cases. This lack of information about the actions of each party increased the lack of trust and goodwill between the two contracting parties of districts and hospitals.

Distrust was also evident from the behaviour of both districts and hospitals regarding referral grants. The hospitals wanted to have a higher referral grant from districts, while keeping the referral workload to the minimum. With such a relationship, there was a high probability of either party disappointing the other. From their previous experience, it was evident that there was very little reputation of trust built between districts and hospitals and the relationship remained strained. Each party consistently accused the other of inappropriate behaviours. Although the contracts explicitly recognized the role of arbitration for resolving difficulties between districts and hospitals, there were hardly

any cases where this was reported. Rather, DHBs and RHBs were left to settle differences between themselves.

5.45: Contracting was attenuated by staffing scarcities and management difficulties

The public health sector is generally bedevilled by staffing constraints, which negatively impact on the delivery of services. The low levels of remuneration and attrition of the workforce have resulted in a lean public sector workforce. The staffing inadequacies are further compounded by the restrictive employment conditions of the Public Service Commission (PSC), which made it difficult to discipline or dismiss a member of staff. While managers in public institutions faced stringent conditions related to PSC workers, those in NGO facilities had more latitude in dealing with such employees. The additional missionary sourced staff in such institutions eased staff inadequacies. In addition, NGO managers also had relatively better latitude for dispensing with PSC workers, something which public institutions were not able to do.

5.50: NGO versus public contracts

The following section discusses the differences between NGO and public contracts. The section specifically looks at: the delineation of service provision among providers; the impact of the social context on contracting; district perception of contracts with NGOs; and difference in the latitude to address provider inadequacies and staff management difficulties.

5.51: Delineation of service provision among providers

Before the advent of explicit contracts in the health sector, NGO facilities were self-governing units managed by mission boards. Missionary values of serving deprived communities resulted in the concentration of NGO health facilities in marginal areas such as rural settings. The missionary values were also reflected in a bias of the type of health services provided. For instance, the NGO facilities concentrated on the provision of primary health care services, since they took this to be an effective way of meeting the

needs of most of the vulnerable populations. So key was NGO concentration on health promotion activities that they were extended to the NGO hospital sector.

Table 5.5: A comparison of transaction difficulties and views on contracting policy between NGO and public hospital contracts

Transaction difficulties -NGOs were able to supplement government staff with those from mission agencies. -Almost all the doctors in the mission hospital were from mission agencies. -NGO facilities had more latitude for managing staff than public facilities. -DHBs were more likely to express satisfaction with NGO than public hospital services.
Opportunism and bounded rationality -DHBs reported better feedback rate from NGO hospitals. -Because of prior experience with the provision of PHC services, NGO hospitals were more likely to have inappropriate referrals -Mission values dictated how service delivery was managed
Value of explicit contracts -Contracts had delineated the provision of health services among various levels of the health system. NGO ceased provision of lower level PHC services. -Introduction of contracting with public institutions meant NGO hospitals effectively had two principals (mission and government). -The effectiveness of contracting had been attenuated by the limited control over staff, which was more pronounced among the public hospitals. -The NGO hospital had less operational difficulties because of the additional resources that mission agencies were able to mobilise

However, and as was demonstrated in the introduction chapters, the provision of low level PHC services by the hospital sector was one manifestation of inefficiencies that the health reforms sought to resolve. As indicated above, the hospitals were required to concentrate on curative health services, while district facilities were to concentrate on the provision of primary and first level referral services. The NGO hospital included in this study for instance had been providing MCH services, which were subsequently stopped

in wake of the health reforms. Although there had been a shift from the NGO hospital provision of preventive services, the NGO staff who had been involved in providing such services may have developed ingrained practices, which could predispose them to accepting patients with minor illnesses. This combined with community expectations of better quality health services from NGO hospitals could work against the delineation of services among providers. Responses from a provider working from a hospital based health centre illustrates this point: "...*We have not had any complaints from the hospital regarding the referrals that we make, at least they have accepted that and if they had any problem, they would have come back and told us you know your referring system is not good but we haven't had such, so we feel we're are doing what we are supposed to do...*"

5.52: The impact of the social context on contracting

As was indicated above, the NGO facilities were based in deprived areas, which were characterised by poor social amenities and abject living conditions. Thus areas in which NGOs operated tended to have poor quality of health services, high levels of morbidity and mortality, and low-income levels. Although the NGO health facilities were perceived to provide better quality of health services, the corresponding services from the feeder government facilities were poor, which posed pressures on the hospitals.

Having been long established in the rural settings, NGO facilities had earned the reputation of providing quality health services, toward which the communities were well disposed. This coupled with the ingrained provider bias toward low level PHC services could have perpetuated inappropriate practices and inefficiencies. The community preference for NGO services produced incessant demand from the population, even when public facilities could effectively provide such services.

The constraints affecting the delivery of services in the public sector had been compounded by provider scarcities and management difficulties. While such constraints were generalised for both the NGO and public hospitals, these were more pronounced for district health facilities that referred to the NGO hospital. Being located in rural areas, the feeder health centres faced graver staff deficiencies than the urban located public

facilities. The relatively worse staffing situation in districts serving NGO hospitals had limited the capacity of feeder health institutions and created contract difficulties.

5.53: District perception of contracts with NGOs

As was indicated in the introduction, the contracts between districts and hospitals were based on historical circumstances, whereby districts contracted with hospitals that were in close proximity. In some rural settings, however, districts had the choice of contracting with public and/or NGO hospitals. Although such districts contracted with both government and NGO hospitals, they were more likely to report satisfaction with the services provided by NGO than public hospitals. As was explained above under district and hospital autonomy, given a choice, districts preferred to contract exclusively with NGO hospitals, but they were tied to specific hospitals on account of spatial factors, which predetermined the hospitals which communities could conveniently access. One of the reasons for districts preferring NGO over government facilities was that the former were more likely to provide feed-back for referred cases than the latter. And because of the high likelihood of receiving referral feedback from mission hospitals, one DHB had decided to formally recognise an NGO hospital as their referral facility over a public hospital.

5.54: Better NGO latitude to addressing provider constraints

The availability and management of service providers was another aspect in which NGO contracts differed from public contracts. The limitations in the absolute numbers of personnel in the ministry and difficulties of staff management had attenuated the effectiveness of contracting. These human resource difficulties were particularly rife in the public service, while the NGO sector had relatively more latitude in dealing with such. The mission hospitals had ameliorated the problem of staff shortages through attachments from church organizations. Furthermore, mission hospitals were better able to deal with personnel belonging to the PSC, whom they would surrender back to the MOH when such were found wanting.

5.60: Conclusion

The introduction of explicit contracts in the health sector was expected to improve the delivery of services through granting of autonomy, the specification and delineation of roles in the delivery of services. The respondents observed that contracting played an assurance role that funding would be provided and had increased interaction between the contracting parties. However, the policy had been attenuated by: inadequacies of providers and difficulties of managing public sector staff; funding constraints; and locked-in relationships. Arising from the locked-in relationships, both DHBs and RHBs accused each other of opportunistic behaviours in relation to referral decision-making and payments. A comparison of contracts with NGO and public hospitals showed that: there had been changes with regard to delineation of service provision; NGO contracts were adversely affected by the deprived conditions of the communities in which they worked; districts well more disposed to contracting with NGO than public hospitals and NGO hospital facilities had more latitude in dealing with provider inadequacies and staff management difficulties.

Chapter 6.00: The levels and patterns of referrals from district health facilities to referral hospitals

6.10: Introduction

This chapter presents findings on the levels and patterns of referrals from district health facilities to hospitals. The chapter starts with an outline of the methods, which were used to assess the levels and appropriateness of referrals, which is followed by the results of the assessment. In presenting findings on the referral levels, six diseases/health conditions are used as tracers, while the assessment of referral appropriateness is done by using both expert and indicator-based methods.

6.20: An overview of the data and methods of analysis

As was detailed in the methods section, the study used quantitative data to determined referral levels. The quantitative data were collected from routine hospital records, using six diseases/health conditions of malaria, RTI, ARC, diarrhoea, tuberculosis, and anaemia. Although it would have been ideal to collect data prior to and after the health reforms, this was not feasible. Nonetheless, the data showed changes in referrals for a period during which the health reforms had been underway for close to a decade and would reflect the underlying policy change. As was illustrated in the methods section, the use of data based on routine hospital records is fraught with difficulties. The lack of data covering the period prior to the health reforms exemplified these difficulties.

While data from hospital records showed the level of referrals, additional data to determine the referral patterns was collected from patients' records. As with the hospital-based data, those from patient records were similarly fraught with deficiencies, not least because the data collection templates were limited to the pre-existing format of the hospital patient records. In order to limit the effect of such deficiencies, two indicators of referral appropriateness were used: expert-opinion based indicators; and

objective-indicator based methods. Medical experts were recruited to review the patient records and results of the reviews are shown separately below.

Table 6.1 shows the list of variables that were collected from patient records. Data collection templates were prepared on which details of patients prior to and after presentation at the hospital were recorded. For details of patients prior to admission at the hospital, the following variables were recorded: name of health centre and date visited, age, sex, referral status (whether somebody was referred with/without a referral letter, or by-passed the health centre), the provisional diagnosis, and reason for referral (either for management, investigation or both). On the second part of the template, the data collected were: name of hospital and date visited; general condition on presentation to the hospital; diagnostic tests done on admission (temperature, blood pressure, respiratory rate, and pulse rate); final diagnosis at the hospital; comments on management of the patient at the hospital; whether the patient was admitted, length of stay in hospital, whether the patient died; and changes in temperature during admission.

Based on the information collected using the templates, the medical experts determined whether a referral was appropriate or not. The reviewers determined the appropriateness of each referral by: finding out whether cases recovered after initial lines of treatment; availability of diagnostic facilities and management skills; and condition-specific indicators of severity. The review method was supplemented by objective-indicator based methods such as: proportion of cases admitted out of those referred; mean temperature on presentation to hospital and changes during treatment; and the survival status of admitted patients.

Table 6.1: List of variables collected from inpatient records and methods for assessing referral appropriateness

Sending health centre
Name of sending health centre Date health centre was visited Age, sex of case Referral status (referred, by-passed, with/without referral letter) Provisional diagnosis (diagnosis done at health centre) Reason for referral
Receiving referral hospital
Name of receiving hospital Date hospital was visited General condition on presentation at hospital Diagnostic tests on admission (temperature, BP, HB, RR, PR) Final diagnosis (diagnosis done at the hospital) Comments on management of patient at the hospital Whether admitted, length of stay in hospital, whether died/alive Changes in temperature during admission
Method for assessing the referral appropriateness
Referral appropriateness (based on tracer conditions of malaria in adults and pneumonia in children) -Expert-opinion based: 1. Inability of cases to recover after initial lines of treatment 2. Availability of diagnostic facilities and management skills 3. Condition-specific indicators of severity -Objective-indicator based: 1. Proportion of cases admitted=number of revealed cases which were admitted/grand total of cases revealed 2. Mean temperature on presentation to hospital and changes during treatment 3. Survival status of admitted patients=proportion of admitted patients who died

6.30: Patterns and levels of referrals

6.31: Patterns of referrals

The following section presents the findings on the morbidity profile of the study hospitals by showing the relative contribution of the selected diseases/health conditions to hospital attendances (Table 6.31). The proportions of the diseases/health conditions to total hospital attendance were presented relative to the corresponding national level disease burden reflected by DALYS. According to the BPC, none of the six diseases/health conditions for which data was collected are supposed to be presented at a third level hospital, except anaemia. Similarly, only RTI and TB are recommended for referral to secondary level hospitals, while malaria, diarrhoea and ARC are supposed to be managed at the PHC/1st referral level.

However, the study found that the disease profile of hospital attendances did not reflect the expected BPC referral norms (Table 6.2). The NGO hospital attended to more (48% for both 1997 and 2002) malaria cases that the public hospitals. Contrary to the BPC, malaria cases were presented at both public hospitals with upgraded health facilities (average of 32 % for both 1997 and 2002) and public hospitals without upgraded health facilities (average 33% for both 1997 and 2002). For diarrhoeal cases, there were relatively more cases attended to by public hospitals (24% and 15%) than the NGO hospital (9%) in 1997. There was a decline in the proportion of diarrhoeal cases presented to all hospitals between 1997 and 2002, with public hospitals having recorded the most marked decline (24% to 14%). There was a low level of ARC cases (average 6%) in 1997 presented to the both the public hospital with upgraded health facilities and the NGO facility.

The disease profile of hospital attendances showed that: all the conditions which were expected to be managed at the primary care level were presented to all the hospitals; although there was a reduction in the proportions presented between 1997 and 2002 for all the diseases, the NGO hospital had the highest proportion of malaria cases, and the

levels for all the hospitals remained stable between 1997 and 2002; while all the hospitals experienced a decline in the proportion of the diarrhoea, malaria and ARC, between 1997, 2002, ARC cases presented to public hospitals without upgraded facilities increased from 3% to 10%.

In 1997, the proportional attendance attributed to TB for the NGO hospital was low (3%), while the corresponding proportion for non-upgraded hospitals (17%) and upgraded hospitals (10%) were higher than the corresponding national DALYs level (2%). All the hospitals registered increases in the proportion of TB cases between 1997 and 2002. The contribution of RTI to hospital attendances declined for the upgraded hospital and non-upgraded hospitals, while it increased for the NGO hospital. In 2002, the proportion of RTI attendances to the NGO hospital was higher (33%) than the corresponding percentage to both upgraded (30%) and non-upgraded hospitals (19%). For anaemia, there was a higher proportion presenting at the NGO than at public hospitals.

The overall assessment of the disease profile for the study districts showed that: the conditions which were expected to be managed at the PHC level and those expected to be referred to the secondary level of care were presented at all the three hospitals; in aggregate terms, there was a higher proportion of primary care cases presented at the NGO hospital than both upgraded and non-upgraded hospitals; upgraded hospitals had slightly more secondary level cases than non-upgraded hospitals. The dominance of malaria and RTIs as causes of hospital attendances was upheld across all the hospitals and both showed limited change between 1997 and 2002.

Table 6.2: Percentage distribution of hospital morbidity and national DALYs profile, 1997 and 2002

Disease/health condition	NGO hospital		Public hospitals (not-upgraded)		Public hospitals (upgraded)		DALYS
	1997	2002	1997	2002	1997	2002	1996
Disease/health conditions which are recommended for management at primary level							
Malaria	0.48	0.48	0.33	0.31	0.33	0.33	0.37
Diarrhoea	0.09	0.06	0.24	0.14	0.15	0.10	0.12
ARC	0.06	0.05	0.03	0.10	0.07	0.05	0.18
Sum	*0.63*	*0.59*	*0.60*	*0.55*	*0.55*	*0.58*	0.67
Disease/health conditions which are recommended for referral to secondary level							
RTI	0.23	0.33	0.22	0.19	0.32	0.29	0.30
TB	0.03	0.04	0.17	0.23	0.10	0.15	0.02
Sum	*0.26*	*0.37*	*0.40*	*0.42*	*0.42*	*0.44*	*0.32*
Disease/health conditions which are recommended for referral to tertiary level							
Anaemia	0.06	0.10	0.03	0.03	0.06	0.06	0.004

ARC (Combined HIV/AIDS and STI cases)

6.40: Assessing the appropriateness of referrals

As was outlined above, assessment of referral appropriateness was based on two tracer conditions of pneumonia in children and malaria in adults. The findings showed that the major purpose of referrals for both upgraded and not-upgraded hospitals was for "management", while for the NGO hospitals, it was for "management and investigation" (Table 6.4).

6.41: Expert-opinion based assessment

As was stated above, medical experts were engaged to review the patient records and determine the appropriateness of each referral. The reviewers used medical information of the patients on admission and during presentation to the hospital to determine whether a referral was appropriate or not. The criteria used for gauging appropriateness can be broadly grouped into: whether an illnesses responded to initial lines of treatment at the

health centre; whether the available diagnostic and management resources at the health centre were adequate for dealing with the condition; and condition-specific indicators of illness severity (the criteria are summarised in Table 6.5 below).

For both pneumonia and malaria cases, referrals were deemed to be appropriate where a patient had not recovered after initial lines of medication. For malaria cases, the initial lines of treatment included: chloroquine, halphan and fancidar, while for pneumonia, they included amoxil and septrin. The availability of medical requisites and management skills were also considered, for instance in the case of severe malaria cases. Various condition-specific indicators were also used to gauge the appropriateness of referral, with temperature being a commonly used yardstick.

Table 6.3: Purpose of referral and whether referral letter was attached or not by tracer condition and type of contract

Background variable	Public hospital		NGO hospital
	With upgraded facilities	Without upgraded facilities	
Referral letter			
Attached	52	51	91
Not-attached	48	49	9
(n)	100	578	183
Purpose of referral			
Investigation	3	1	1
Management	77	92	23
Investigation & Management	20	7	76
(n)	120	562	160
Referral letter			
Attached	86	53	97
Not-attached	14	47	3
(n)	655	30	134
Purpose of referral			
Investigation	8	0	1
Management	74	80	26
Investigation & Management	18	20	73
(n)	669	10	125

Note: There differences in the "n" for the various variables arose from the varying levels of completion of the patient forms: for instance the total number of forms for which the purpose of referrals was indicated was different from those for which a referral letter was attached.

Table 6.4: Summary of criteria used by medical experts to determine whether a referral was appropriate or not

The medical reviewers contracted to assess referral appropriateness used information of the patient on admission and during treatment. The criteria used for assessing referral appropriateness could be broadly grouped into three classes: whether an illness responded or did not respond to initial lines of medication; whether the diagnostic and management resources at clinics were adequate for dealing with the illness; and disease-specific indicators of illness severity.
Failure to recover after initial line of medications: The major indicator which was used to determine referral appropriateness was appropriate or not was whether a patient had recovered after initial lines of medication or not. Referral cases deemed to be appropriate where those for which no improvement of the condition was recorded after treatment with initial drugs such as chloroquine, coartem, halphan and fancidar, for malaria; and medication such as cristapen, amoxil and septrin for pneumonia. *Availability of diagnostic and management resources* Referrals were deemed appropriate for cases, which needed higher diagnostic equipment and management skills. For instance all cases of meningitis, for which the lumber puncture procedure was required were considered appropriate. Cases, which required intensive diagnostic and management resources were also appropriate: anaemia; investigation of sudden abnormalities such as high BP, convulsions, and jaundice. Conditions requiring investigation to ascertain the cause of an illness were also taken to be appropriate. *Indicators of illness severity* Various condition specific indicators were used to gauge illness severity, with temperature being a commonly used yardstick. Where the temperature had been consistently high, the referral would be deemed to be appropriate, especially where this was in combination with failure to respond to initial treatment. For pneumonia in children, nasal flaring was the most widely used sign for assessing referral appropriateness. Other indicators included: patients having high palor, those who were dyspnoeanic, difficulties in breathing, cases exhibiting subcostal/chest recession, those with jaundice, tachypnoea and respiratory gloating.

Based on the indicators described above, the medical experts determined whether a referral was appropriate or not. From the first evaluation, although there was a higher level of malaria referral appropriateness for non-upgraded hospitals (79%) than upgraded hospitals (73%), the relationship between these hospital types and referral appropriateness was not significant ($p>0.05$). The lack of a relationship between level of referral appropriateness and whether a hospital had upgraded facilities or not was upheld by the second evaluation. The findings on comparison of levels of pneumonia referral appropriateness between upgraded and non-upgraded hospitals upheld these results too. Both the first and second evaluations showed that there was no relationship between levels of referral appropriateness and whether a hospital had upgraded facilities or not (Tables 6.6 and 6.7 below).

While the comparison of referral appropriateness between upgraded and non-upgraded hospitals showed that there was no significant relationship, a comparison of NGO/ public hospitals showed statistically significant relationships. The level of malaria referral appropriateness was higher (78%) in public than NGO hospitals (38%), for both the first and second assessments. Similarly, the level of pneumonia referral appropriateness was higher (87%) in public than NGO hospitals (53%). Again, this was observed from the first and second evaluations.

To summarise, the results on referral appropriateness based on expert opinions showed that there was no relationship between upgraded/not-upgraded hospitals and level of referral appropriateness for both malaria and pneumonia. However, there was a significant relationship between public/NGO hospitals and the levels of referral appropriateness for both malaria and pneumonia. A comparison of referral appropriateness by tracer condition showed that referrals were consistently more appropriate for pneumonia than malaria cases.

6.42: Objective indicator-based assessments

The expert opinion based assessment of referral appropriateness was supplemented by objective-indicators based on data collected from patient records. The indicators used to assess referral appropriateness included: the admission rate of referred cases; the survival

status of admitted cases; and the time taken for the temperature to normalise during admission.

The admission rate of referred cases

The proportion of referred cases that were admitted could be used as a proxy for referral appropriateness because the decision to admit is, among other factors influenced by the severity of an illness. Thus, in comparing the appropriateness of referrals across hospitals, the proportion of cases admitted out of those referred was used. A comparison of malaria admission rates showed that they were lower (86%) for upgraded hospitals than for non-upgraded hospitals (99%) (Table 6.35) and the relationship was significant ($p<0.01$). However, there was no relationship between pneumonia admission levels and whether a hospital had upgraded not non-upgraded facilities.

A comparison of admission rates for NGO and public hospitals showed that they were higher under the latter. For malaria cases, 95% had been admitted under public hospitals, while 44% had been under NGO hospitals ($p<0.01$). Similarly, for pneumonia cases, 96% were admitted in public hospitals, while 54% were in NGO hospitals ($p<0.01$). The high levels of admission under public hospitals imply relatively higher levels of illness severity compared to NGO hospitals.

A comparison of admission rates between the two tracer conditions of malaria and pneumonia showed that they were higher for the latter. More pneumonia cases were more likely to be admitted than malaria cases. These differences were consistent across all hospitals.

The survival status of admitted cases

A comparison of the survival status of the admitted cases revealed that there was no relationship between upgraded/non-upgraded hospitals and the death rate for pneumonia cases. The comparison of the death rate for malaria cases, however, showed that it was higher for upgraded (17%), than non-upgraded hospitals (5%) ($p<0.001$).

In line with the other indicators shown above, a comparison of death rates between public and NGO hospitals showed that referrals were more appropriate under the former. For malaria, a higher percentage of referred cases died under public (7%) than (1%) NGO hospitals ($p<0.05$). Similarly, more pneumonia referrals died under public (22%), than NGO hospitals (4%) ($p<0.01$).

The findings on the time it took for the temperature to normalise during admission, showed variations. There was a higher proportion of cases for which the temperature normalised within twenty four hours of admission in upgraded hospitals (49%), which was slightly lower than that for non-upgraded hospitals (46%). However, hospitals with upgraded facilities had a higher percentage (33%) of cases for which the temperature normalised after seventy two hours than non-upgraded hospitals (18%) ($p<0.01$).

A comparison of changes in temperature recordings showed that cases from public hospitals consistently showed longer periods in which the temperature normalised compared to those from NGO hospitals. Given that it took longer for the temperature to normalise under upgraded than non-upgraded hospitals, it can be concluded that severity was higher under the former. A comparison of public and NGO hospitals showed that the differences in the time taken for temperature to normalise were significant ($p<0.01$).

Table 6.5: Indicators of referral appropriateness: first and second opinion, proportion admitted and survival status (malaria in adults)

Referral appropriateness and survival status	Contracting context			
	Health facilities upgraded	Health facilities not upgraded	Public hospitals	NGO hospital
Was referral appropriate? (first opinion)				
Yes	73	79	78	38
No	27	21	22	62
(n)	118	583	701	185
	p>0.05		P<0.001	
Was referral appropriate? (second opinion)				
Yes	83	75	76	38
No	17	25	24	62
(n)	71	581	652	186
	P>0.05		P<0.001	
Proportion of revealed cases				
Admitted	86	99	95	44
Not admitted	14	1	4	56
(n)	111	304	415	185
	P<0.001		P<0.001	
Survival status				
% of referred dead	17	5	7	1
% of referred alive	83	95	93	99
	104	579	683	79
	P<0.001		P<0.05	
Temperature normalises				
Within 24 hrs	49	46	47	21
24-48	9	28	23	54
48-72	9	8	8	18
72+	33	18	22	6
(n)	86	221	307	66
	P<0.010		P<0.001	

Table 6.6: Indicators of referral appropriateness: first and second opinions, proportion of admissions, and illness severity indices (pneumonia in children)

Referral appropriateness and illness severity	Contracting context			
	Health facilities upgraded	Health facilities not upgraded	Public	NGO
Was referral appropriate? (first opinion)				
Yes	87	97	87	53
No	13	3	13	47
(n)	678	34	712	135
	P>0.05		P<0.001	
Was referral appropriate? (second opinion)				
Yes	95	90	95	52
No	5	2	5	48
(n)	625	34	659	135
	P>0.05		P<0.001	
Proportion of revealed cases				
Admitted	96	100	96	54
Not admitted	4	0	4	46
(n)	644	34	678	133
	P>0.05		P<0.001	
Survival status				
% of referred dead	23	21	23	4
% of referred alive	77	79	77	96
(n)	647	33	680	69
	P>0.05		P<0.001	

6.60: Conclusion

The proportion of the selected diseases/health conditions presented to both upgraded and non-upgraded hospitals were not very different. Both hospitals had high proportions of primary health conditions. Although the proportion of such cases declined between 1997 and 2002, the ratio of malaria remained the same for both hospitals. The proportion of cases recommended for referral to the secondary level of care increased or remained the same for upgraded and non-upgraded hospitals. There was no major difference in the

proportion of cases presented to upgraded and non-upgraded hospitals. The disease profile for the NGO hospital was closer to the expected pattern of a secondary level hospital, but the hospital also catered for a high proportion of primary health conditions.

Although referrals to upgraded hospitals were more likely to be appropriate than those to non-upgraded hospitals, the differences were not statistically significant. There were no major differences in the severity of cases that were referred to the upgraded and non-upgraded hospitals. However, a comparison of referral appropriateness between public and NGO hospitals showed consistent differences. The referrals were more appropriate for public and than NGO hospitals.

Chapter 7.00: The incentive structures facing districts and influences on referrals

7.10: Introduction

This chapter presents findings on the incentive structures facing districts and how these impacted on referrals. The chapter starts with a discussion of the perverse incentives of block contracts. This is followed by a discussion of managerial incentives such as the inclination to increase revenues, providers' preference for administrative over clinical roles and desire for expanded autonomy. A discussion of the socio-political incentive structures facing districts follows. The second part of the chapter discusses how the identified incentive structures impact on referrals from district health facilities to hospitals.

7.20: The financial incentives

7.21: Type and mode of reimbursements to districts

The financial incentive structures facing districts and influences on referrals are summarised in Table 7.1. Districts were given block payments for the provision of health services to their client populations. Since the contracts were block payments, it provided the districts with no strong incentives for efficient behaviours because they were assured of payments irrespective of their performance. As was outlined in the section on the policy of explicit contracts, although the contracts stipulated that sanctions would be imposed on districts which did not perform well, such provisions had not been invoked before, and for the most part, districts were assured of payment irrespective of the level of performance.

The limitations of the block contracts were further compounded by the mode of payment, whereby hospital referral grants were paid to districts, which in turn transferred the same to hospitals. The mode of payment disadvantaged the hospitals in the sense that in most cases the districts had an upper hand in determining how much of the grant would be

remitted to hospitals. In all the cases studied, DHBs paid hospitals minimal grants. While hospitals consistently argued that the grants from DHBs were inadequate, the latter countered by observing that the overall grants that they received from the CBOH were limited. Justifying the low grants given to hospitals, a DHB manager said: "*...I think there are a number of things that have to be considered, and each district has its own unique problems like in our case, you will find that if we paid more than 30%, we might end up in problems because currently our wage bill is very high and there are a lot of members of staff who are not on government payroll... So you can see that if we say we increase to 30 %, then as a district we shall remain with very little money to run..*" (DHB manager)

Table 7.1: The financial incentive structures facing districts and influences on referrals

Financial incentives	Influence on referrals
-Block contracts do not encourage efficient practices -districts were assured of grants irrespective of level of effort -Providing of more non-BPC services -Provision of more non-BPC more likely where monitoring is limited -Tendency to spend more time on those parts of the contract which are monitored -Where monitoring costs are high, contracted party will act opportunistically	-districts did not put in much effort to ensure efficiency in the delivery of health services -this manifested in the persistence of inappropriate referrals to hospitals. -Districts cut costs through sending more referrals to hospitals -Non-effectiveness of sanctions perpetuated cost shifting behaviours by districts -High referral levels to hospitals were compounded by limited control of district managers over frontline providers -Districts did not pay much attention to rationalising referrals, in part because the HMIS did not capture this information. -High cost of collecting and analysing information made it difficult to rationalise referrals -Districts used hospitals' lack of information on referral workload to their advantage.

When deciding on how much of their grant to give the hospitals, the DHBs were limited by the low overall grant and financial needs. Invariably, the DHBs gave priority to meeting their immediate needs over paying for referral services. This situation was made worse by the lack of a method for relating the referral grant to the related hospital

workload, which both DHBs and RHBs were mindful of. As a result, the districts were taking advantage of their position as purchasers of health services, to the disadvantage of hospitals. Despite the persistence of this difficulty, nothing much had been done to resolve it and hospitals were on the losing end.

7.22: The influence of financial incentives on referrals

The levels and mode of payment of district grants impacted on referral levels by: tempting districts to limit grants to hospitals and encouraging complacency because of the lack of sanctions for deterring negative behaviours. Given the limited overall grant, districts were tempted to increase referrals to hospitals in order to reduce their costs and thus keep the "surplus". In such a setting, the district managers would be less fastidious about monitoring the referral practices of frontline providers.

The problem of inappropriate referrals to hospitals was further exacerbated by the lack of sanctions for inappropriate practices. This limitation accentuated the perverse financial incentives from the districts. According to the health financing policy, which is detailed in the introduction section, DHBs were responsible for managing and providing primary and first level referral services, while RHBs managed and provided 2nd and 3rd level referral services. While the BPC explicitly outlined the range of services that were supposed to be provided by districts and hospitals, there was often a discrepancy between what was expected and delivered. Inappropriate referrals in part arose from this discrepancy and overlap in service provision. The dysfunctional referral system was further illustrated by weak links between health centres and hospitals. Effective management of a referral system would entail that cases deserving referral are appropriately and timely assessed and referred to the appropriate higher level. After a referral is received, the referral institutions should refer back to the sending institution for continuation of care, where this is needed. However, this as will be shown below was hardly the case and as a result referral problems persisted.

7.30: The incentives facing providers

7.31: The providers' professional and social incentives

The providers' professional and social incentives facing district frontline providers and their influence on referrals are summarise in Table 7.2 below. In order to gauge the motivations of frontline providers, they were asked to indicate what their career ambitions were. While the providers consistently talked about how they were driven by the need to serve their communities, they also observed that they had been attracted to work in public health institutions by the better training opportunities, which were available in the sector. But for such opportunities, most of them would have opted for the private sector, which offered better conditions of service.

The public health sector was used as a ground for upgrading skills, attaining more qualifications and gaining professional experience for better employment opportunities in the private/NGO sector. This view was supported by findings on the career ambitions of the respondents, most of who aspired to join either the private sector or NGO organizations. The following excerpts from interviews with providers were illustrative of their career objectives. The results showed, and as is indicated above that the providers used the public sector to gain experience, acquire qualifications in order to achieve their career objective of being employed in the private sector. Although some of the respondents did not voluntarily say that they aspired to get a job in the private sector, they would, after further probing, indicate their preference for the private over the public sector. In response to a question about their professional ambitions, a provider said:

....I just don't want to end up as a mid-wife, maybe I would love to do post-basic nursing.
Q: And then after getting your post basic nursing qualification?
A: I would go in the area of public health nursing.
Q: Within the public sector or outside the public sector?
A: Within the public sector.
Q: You have no ambitions of joining other organisations?
A: Either of those [private and public organisations],... I can join the private sector.
Q: What is your preference?

A: Okay, preferably, because now we are talking of greener pastures, the private sector would be better... it has more advantages...then I will join the private sector. (District health provider)

Table 7.2: Professional and social incentives facing district frontline providers and their influence on referrals

Incentives	Influence on referrals
Disposition to acting in socially expected ways: -emanating from providers' empathy for communities -shared experience of social deprivation that had affected communities	
Sanctions and rewards facing providers: -The institutional sanctions were weak and not able to deter negative actions -The institutional rewards were also ineffective and not able to influence provider behaviour -On the contrary, social rewards and sanctions were strong determinants of provider behaviour	-The providers responded to social incentives, which resulted in high referral volumes to hospitals -The relatively more effective social than organisational rewards resulted in providers acceding to community pressures for referral.
The motivation for personal advancement -Advancement of academic qualifications -Advancement of professional qualifications -Gaining professional experience in the public sector	-By improving their academic and professional competency, the providers were able to make better-informed referral decisions. -Improved provider competency was however attenuated by public sector service provision constraints.

Similarly, another respondent observed that they wanted to change their profession from a clinical officer to a pharmacist, because there were more opportunities for pharmacists than clinical officers:

...because I have seen that as [clinical officers], we don't have so many avenues. It is either you remain a clinical officer general or you do psychiatry or you go for theatre nursing. But I would want something more

advanced..... for which I can get a degree, thereafter, proceed to PhD. So I thought pharmacy has so many avenues.
Q: Once you get your Pharmacy qualifications, do you see yourself...remaining in the public sector or you would prefer working in the private sector?
A: [The] private sector [is] better, because what we follow is money. (District health provider)

Talking about his ambitions after retiring, a provider said:

> *...Some years down the line, as a professional. ...I am just waiting for my [retirement]. I hope to establish a very good clinic. I want to go into the private sector... though I am already there. I should now consolidate....I have got my own clinic. Now if I left work, I think I can solidify it. But before I go, I want to do some further training in counselling and management.*
> *Q: Why do you want to do those [counselling and management]?*
> *A: Why? Well, maybe one by one; counselling may be it will help me in future endeavours. Because whatever I will do, it will need counselling. Even if I left work, or even if I am here, it will still need a lot of counselling in my screening time - I will need counselling. Administration again if I left my employer, I run my own [clinic], I will need to have skills in management.*

The in-service training opportunities were a strong incentive for the workers, who observed that there were more of such opportunities in districts than hospitals. The most commonly cited seminars/workshops were: Integrated Management of Childhood Illnesses (IMCI); Syndromic Management of STIs; and Family Planning and HIV/AIDS management and counselling. The public sector was valued for the training opportunities it provided, which were not available in the private sector: "*...I have never seen people who are working for a private surgery or who used to work for the mines [attending workshops]. There [the private sector], it is not a priority, capacity building is not a priority...*" (District provider)"

7.32: The influence of professional and social incentives on referrals

Although ultimately the providers were motivated by the self interest to advance their academic and professional standards, these incentives impacted on referrals decision making. The acquisition of skills positively impacted on referral decision making by raising the competencies of providers and hence enabling them to make better- informed decisions. The providers observed that the workshops had had positive effects on their referral decision making practices. For instance, they reported that the workshops on

IMCI, which most of them had attended had improved their referral decision making by availing them with the skills for assessing illness severity using less technologically based methods. They observed that they were able to assess illness severity through such manual assessments as checking the rate of breathing, chest in-drawing and presence of convulsions in children presenting with pneumonia.

Talking about how the training on syndromic management of STIs had improved his competency, a provider said: "*...Like the syndromic approach to STIs, [before attending the course] we used to send patients to the lab [at the hospital], and some patients would never come back maybe because of the costs at the lab. So, with this approach, we are able to treat patients there and then. Even IMCI has made our work easier because it has restricted sending for unnecessary investigations. Now, just from the symptoms and using IMCI methods, we are able to come up with the diagnosis and treatment...*" Similarly, another respondent said*: ... I have liked this course I did in the IMCI, it has helped me to refer when necessary. I like it because before I was trained in IMCI, I used to get stuck.....when do you refer the child?...IMCI taught me enough, I know when to refer* (Frontline provider). The providers were unanimous in their view that in-service training opportunities had positively impacted on their capacity to referral appropriately.

As with the syndromic management of STIs, so too with the management of childhood illnesses, training opportunities had availed the providers with knowledge on how to use less technologically based methods to assess the illness severity. The common indicator used for deciding whether a patient should be referred or not, both in cases of malaria and pneumonia were situations where the patient had not recovered after initial lines of treatment. The respondents observed: "*... for pneumonia there is in-drawing of the chest, then fever...they are given cristaphen, if there is no improvement, that is when they refer to [the hospital]...*" "*...in malaria - they are given first line of treatment, [which is] coaterm [an ACT drug]...the new drug. [Alternatively, they could be given] fancidar [Sulphate Pyrimethenine]. If a patient doesn't improve on fancidar, maybe they do the slide is positive, again after doing the slide despite taking fancidar, it is still positive, then go to second line treatment. Then if it is quinine, let us say the patient is even going*

unconscious, to cerebral malaria, then such... we refer..." "...we manage here and if, we don't have drugs, because the severest malaria we are talking of cerebral malaria, if we have drugs, we manage here because it is the same management that will be done at the hospital which will be done here. Only if we have the drugs here, we exhaust the management. If the patient is not improving, only then do we refer. But again, when we have got a doctor, we always refer to the doctor. ...but when there is no doctor, we have exhausted all the management of malaria, we simply refer...(various district frontline providers).

Other than the history of medication taken, the providers observed that they used other indicators of illness severity. For assessing the severity of pneumonia in children, they would check for signs of chest-in-drawing, convulsions, and fast- breathing. ...*For pneumonia, the first thing that we look at is if there is a general danger sign. Let us say, the baby comes with cough then difficult in breathing and you find that the baby has a fast breath. And when we also check on the chest, we find that there is chest in-drawing and then they also could have a general danger sign which is, maybe they are even convulsing or they are not able to drink or they are drinking poorly or there is a history of convulsions. Yes such babies ..mostly we refer*...(Frontline provider). ...*We look for chest in-drawing for those kids who are 2 months and above up to 4 years, then those below 2 months, we look for nasal flaring and also severe chest in-drawing. ...Malaria, severe malaria, if we don't have quinine and medic fluids to use for quinine that is when we refer*...(Frontline provider).

While in-service training opportunities had resulted in improved competencies of the providers, this was sometimes undermined by the limited work environment in which they operated. Thus although they could be technically competent, such limitations negatively impacted on the effectiveness of their referrals decision-making. Such factors included: limited staff, especially in peripheral health facilities, limited management facilities such as bed space and diagnostic facilities. Given the paucity of doctors and clinical officers, nurses often made referral decisions. And to this end, both nurses and clinical officers acknowledged that where nurses (especially enrolled nurses) made

referral decisions, these were likely to be inappropriate. A respondent from a health centre talked about problems encountered when making referrals: "...*The difference [between clinical officers and nurses] is writing history. When you refer a patient to the hospital, you are supposed to put in all the patient's particulars, and you do everything required.... you are supposed to follow historical system, so that when the patient arrives at the hospital at least they must find [what the] initial treatment was. Now, the only difference is with our other friends [nurses], case history is bit of a problem. ... Actually, even about 3 weeks ago we had a seminar, they [nurses] also agreed that [they found it difficult to write history]*".

Other than the pressures occasioned by the limited number of providers, workplace related factors were also contributory. Commenting on the problems of bed space in the clinics, one provider said: "... *I remember one time I was on night duty and there came a case of gastro enteritis. We had no room here, all those examination rooms... there were people there. So I referred this case - I remember we received a telephone call [from the hospital] that why have you referred a gastro enteritis case. I said we have no room - we can hydrate the patient, but right now we have no room - definitely you can't put a floor bed for the patient. So, in most cases the referral issue is governed by the availability of rooms in the wards.*

In the words of a clinical officer: "...w*hat I have discovered [is that] at a clinic level, you start the cases [from scratch] but when you are at the hospital you continue from where they ended at the clinic, so you will find that you handle the referrals. ..with the clinic, the advantage is that you handle cases from the first level, and you will be able to make your own decision before anyone sees that case, and then at the hospital its more like... when referrals have already been made, there are some other [provisional] diagnosis, so you will base your [judgement on this diagnosis]... at the clinic you have to start on your own. You have to think harder to come up with your diagnosis....* (Frontline provider).

7.33: Providers' motives: serving managerial or social interests?

As was indicated above, in order to gauge the incentive structures that the providers faced, they were asked questions aimed at determining what motivated them to act in the way they did. The study results showed that the providers were striving to pursue their own interests, and also balancing the interests of their managers and the communities that they served (results summarised in Table 7.3 below). While the providers consistently talked about their interest in serving communities, very few of them talked about their obligations to their employers without prompting. District heath managers would usually only be mentioned after probing with specific questions about whether what they [frontline providers] did was in line with the district manager's expectations. From the probes, the providers indicated that they were aware of the constraints that their managers faced and how referrals sometimes complicated the management of health services.

District managers in turn observed that the referral practices of the frontline workers were sometimes not in alignment with their expectations. One DHB respondent said:

"...no...I would cite two examples for that: [instead of using the standard referral form]..some of the referral letters have been lacking information. [That is why], we want more clinical officers, because clinical officers are most specialized with the examination of patients and diagnosing the problem..(DHB respondent).

"....That [assertion by hospitals that districts make a lot of unnecessary referrals] could be true in the sense that we as a district do not have an x-ray so for such cases we refer to the hospital. ...currently some of the health centres do not have clinical officers who are supposed to handle the cases...so as a result they [patients] are seen by nurses (DHB respondent)...".

"...On the figures, what the district expects is not a true reflection of what the clinic can refer...because sometimes in the clinics, the referrals are done irrationally because the district expects real cases to be referred to the hospital. But on the ground you will find that even unnecessary cases go to the hospital, for instance if a clinical officer is not there, there are only nurses, you will find that some cases which are being referred don't merit being referred or indeed if the doctor is not there, the clinical officer might fail in

his work... he just refers unnecessarily. ...The other thing is we are under pressure as you have seen and we receive a lot of patients at one time, so, I think the other thing is staff - they are not enough. ..I think that can help so that maybe those who are not very serious can be treated in the community in order to decongest the clinics. So there are some patients who just come; but now.....at the same time, there is another serious patient, you are wasting time attending to someone who is just got a cough rather than attending to a patient [who is very sick]..."(DHB respondent)

When asked whether their referral practices at health centres were in line with what their DHB managers would expect them to do, the providers answered in the affirmative, while District Managers were more likely to give contrary responses. The District Managers were more likely to acknowledge that the front line providers made inappropriate referrals. The tendency to make inappropriate referrals in part arose from the frontline providers' empathy for the communities, which led them to act in a socially accepted manner: for instance in talking about the difficulties communities faced in accessing health services, a provider said: "*....the hospital is 35 km from here, so looking at our community [where most of them] are poor, they cannot manage to bare the costs involved. So, I think we are having a big problem, the fuel cost and maintenance costs for the vehicle... patients are made to contribute a small fee towards that transportation, but not every one is able to manage..*"(District frontline provider). This quote illustrates the frontline providers' sympathy for communities. In this instance, the cost of travelling would be expected to reduce the likelihood of referral to hospitals. However, this was limited to remote rural settings, whereas elsewhere the providers' actions generally induced referral pressures on hospitals.

In talking about the financial difficulties that communities faced, which sometimes limited their utilisation of health services, a provider suggested that communities should subscribe to the prepayment scheme, so that they did not have to pay at the point of need: "*...So, I think that way we are supposed to help we are not supposed to say the community has done bad, but there are some patients who have been kept at home because they don't have the scheme [prepayment scheme]. So those people, the*

community should also know that the better thing they should do to is to get the scheme, and if somebody falls sick, the scheme will help them." (District frontline provider).

Table 7.3: Managerial and social incentives facing providers and their influence on referrals

Incentives	Influences on referrals
District manager interests: -Realise integrated district health system -Ineffective organisational sanctions and rewards attenuates effectiveness -Limited district influence on frontline providers limits effect on referrals -Political influence manifest in the provision of health services Providers social incentives: -Provider's empathy for communities -Strong social rewards and sactions	-Weak organisational rewards and sanctions perpetrated inappropriate referrals -Ineffectiveness of managers' control over staff -The influence of political/social pressures on referrals

In addition to empathising with the community regarding the financial difficulties that they faced, the providers also variously described how they enjoyed serving the society. Talking about the satisfaction that thy got when a patient they had attended to recovered, a provider said: "...*What I would want is...just like the health reforms at work...just to see people getting quality medical care because it just feels good when somebody comes to you very sick, you give that quality care, and the person comes back walking for himself and says thank you very much I am feeling better. It feels nice. So I strive just to give the best I can..*". Another one narrated how working in a private surgery would not augur well with their beliefs: ...*When I started work, I started with a [private] surgery and I saw that people have to pay a lot of money.... I realized not only am I a Clinical Officer in this field, am also a Christian. So I feel if I had a [private] surgery, I woudn't be doing good. Working in a government clinic, there would be more security since I have to work with all my heart to help the people...and the money patient pays is minimal compared to the private surgeries.*

The providers' devotion to serving communities was further evidenced by responses to questions regarding the work-related scenarios that they avoided most. An overwhelming majority said they would not want a patient to die in their care. In order to avoid this from happening, they stated that they strove to provide the best possible care for patients and effect referral for specialised care, where this was required. They observed that in cases where patients died in a provider's care, the latter were not usually at fault as no one would intentionally want a patient to die. The risk of getting infected was also mentioned as a work-related situation that they avoided. The risk had become particularly serious with the advent of HIV/AIDS and TB. "....w*e are meeting quite a lot of TB cases, like what we are doing now, we are working in collaboration with TDRC (Tropical Diseases Research Centre) collecting specimens...so I am supposed to be cautious. You have to be very careful by using protective clothing there because if you just go there without protective clothing, you can get infected* (Front line provider). Similar views were expressed by midwives, who by the nature of their work came into contact with blood and hence faced the risk of infection.

While being wary of the internal work-related risky situations, the workers were also mindful of inappropriate pressures from the community. They expressed aversion to the risk of corruption at the work place. "... w*hat I don't want is to be corrupted. A person comes saying here is K5,000 just give me seven days sick off,.... I say my friend, I have enough money which is more than this K5,000. I know a person cannot be perfect, just as it says self praise has no recommendation but other people can even bear witness to say he tries by all means to avoid such practices...*(Frontline health provider). The providers were mindful of the social implication of being labelled corrupt in the community, which they observed would tarnish their reputation. The following excerpt from an interview buttresses the providers' views about corruption:

Q...In terms of your work environment, what...would you want not to happen to you?
A. Corruption
Q. How and what kind of corruption?
A. You know, when you are working in clinics or in hospitals, it is easy for you to be biased. Some patients who come there are not just patients, they are patients in quotations...they are [important people] in society. So you will find that at the end of attending to them, they will give you something and if you get that money, you

will be biased. Each time that person comes, you will give him special care; and what about the poor who is not giving you anything. So you find that because we are prone to this kind of corruption. I wouldn't want it to happen to me and it is one thing I am avoiding...I would give you an example of what had happened when I was at X, this patient from the office of the President... he was a regular patient at our clinic, this time he just came and he said I am impressed with the way you work and he left K80,000. I said no! But he said I have given you from the bottom of my heart. I said there is nothing like giving from the bottom of my heart. With that it would help me not to be biased in my work. I do my work [regardless of) whether one is poor or rich.... they are all entitled to getting the same medication..." (District frontline provider).

The tendency of patients to offer payments in return for preferential treatment seemed to be a widespread practice, which most providers alluded to. They, however, observed that they did not encourage this practice as it would compromise their professional standing and may lead to more affluent patients receiving preferential care, something which went against their professional ethics. They continued and observed that all patients that presented for health care ought to be accorded similar treatment irrespective of their social position.

7.34: The influence of social and managerial incentives on referrals

The excessive reference to social considerations when making referral decisions showed that social rewards were more effective in influencing provider behaviour than organisational rewards. Just as there were no effective organisational sanctions for deterring undesirable actions, so too there were no effective rewards to recognise positive provider actions. The salary, which was the major reward, accrued to all staff and could not be expected to be an effective incentive for influencing referrals. In contrast, however, the social rewards seemed to be very effective and this was exemplified by such provider observation as patients recovering and in some cases coming back to show their appreciation. The high value attached to community appreciation of the health providers' work may, however, generate a negative effect in the sense that providers may exert too much effort to gain social approval at the expense of meeting their managers' objectives. In terms of referrals, this may manifest in unnecessary referrals to hospitals. The provider's constant reference to the fear of patients dying in their care and the

concomitant social sanctions (spreading news that a patient had died in a providers' care) could have such effects.

The study showed that provider behaviour was in part influenced by the socio-political pressures that were exerted. Social pressures for referrals were recounted especially in urban areas, where patients would present and demand to be referred to the hospitals. Such pressures impacted on referral through individuals directly requesting to be referred to hospitals, which they perceived to provide better quality of health care than health centres. *".....you know there are some patients who come and would want to be seen at the hospital. Sometimes they just go straight [to the hospital]....[where] they are told to go to the nearest health centre. And then when they come, even when there is no need for referral. ....Sometimes it also depends on the type of patient, others think they are very important patients and they think they cannot be attended to here they want to go to the hospital but just because they were sent back now they want you to write a referral letter. If you haven't written a referral letter they would find others...they even report to the director.... others they would call the sister-in- charge. I have seen a patient who came, they wanted to be referred, we said no, we can manage you here but that patient went and called [rang] the sister- in-charge. Anyway we just suspected it was the patient because, he blasted us here and then he went away, he called [rang] the sister in charge that the clinical officer I found on duty was rude ...[he accused us of neglecting patients] ...not being serious with work but he refused to leave his name and where he was calling from. So there are such problems that we face..."* (Frontline provider).

7.40: Incentive structures and influences on referrals: NGO and Public contracts

The major differences in the incentive structures facing districts that contracted with NGO versus those that contracted with public hospitals were in respect of: the social deprivation and poor health status of communities; the poor quality of NGO district health facilities which raised the urge to refer; the social/political significance of public hospitals and pressures arising from there; and the congruence of NGO managers' and providers' motivations.

7.41: Social deprivation predisposed districts to refer

The districts that contracted with the NGO hospital were located in deprived peripheral areas, which posed difficulties for the delivery of health services. While resource limitations were common to district providers in both rural and urban areas, these were more acute in the former. The combination of poor public sector facilities, poverty and high morbidity burden in the rural settings increased the referral pressures on the NGO hospital. In urban areas, both the direct (such the health service fees) and indirect (for instance income forgone) costs of accessing health facilities impacted negatively on the utilisation of health services. In the rural areas, on the other hand, the overriding survival needs meant that delays in first contact with health facilities were common, which aggravated the health conditions of such communities and imposed pressures on the health system.

There were differences in the health seeking behavior of rural and urban communities, which created pressures on hospitals. For instance, providers reported widespread use of traditional medicines, which sometimes resulted in communities delaying to access health services and in the process aggravating their conditions such that by the time they sought health care, complications would have set in, thus necessitating referral. NGO hospitals were affected by such practices to a greater extent than urban based hospitals. When talking about such difficulties, one provider said:...*Yes, I think the major problem with the community is that usually people try to use traditional medicine. Its only after they see that the medicine is not working that's when they rush to the hospitals, by that time the condition might have worsened. Most of the maternal deaths are usually due to these reasons, that they come a bit late to the hospital. Even though we are talking about this, but it is difficult to change an attitude that has been there for some time. But, people are responding a bit, but there are always those cases that report very late at our health centres, and even though we refer them to the hospitals its very late to assist them*...(Frontline provider, contract with NGO hospital).

Other practices that created referral problems included the tendency to bring patients in advanced illness stages. This practice was said to be more common with the advent of HIV/AIDS and associated conditions. The tendency of minders to bring severely ill patients to hospitals late may be explained by the widespread practise of home-based care for patients with chronic conditions. Such patients would normally be taken to health centres when they were at the point of death, since minders preferred that their patients died in health institutions.

In other instances, families administered medication before taking patients to the hospitals and in the process complicating the patients' conditions. For instance, a respondent said: *"…. I had a patient who was believed to have swallowed some poison. So, the relatives instead of [bringing] the patient to the clinic, they decided to give the patient what they thought was going to help at home. So by so doing they had made the patient to die. So the community also should be told when they're supposed to bring their patients to the clinic…..*

For maternity cases, the practice of women to wait until they were dilated before seeking health care was recounted. Providers observed that such practices were undesirable since they increased the risk of infection, which resulted in complications and added to referral pressures. *"…In maternity wing there is, you know traditionally, they give African medicines and that can complicate delivery. The labour may start afterwards when that medication which they give at home stops working, the contractions may cease, but you know, that woman was having contractions when she came and the dilatation of the cervix has already started…at a certain point, the contractions disappear. So, we have no doctors here, we work on our own as midwives…we should transfer that patient to the next level to be managed by a doctor. So, I would say that is where the community make a mistake… they are not supposed to give some medications which they give at home. They are supposed to leave the labour to follow the natural way…(Frontline provider).*

It ought to be mentioned that community pressures were also exerted in the opposite direction, where people resisted being referred to hospitals, preferring to either be treated at health centres or to be sent back to their homes. Such situations were reported in cases

of patients with chronic conditions, who had developed hospital fatigue. This was especially the case for public hospitals, which communities tended to shun because of the poor quality of care associated with these.

7.42: Social/political pressures were exerted on public hospitals

The political pressures exerted on hospitals/ health facilities in part arose because such institutions are recognized as important symbols of government and as such government would want to ensure that they acted in line with their wishes. The political significance of health institutions was more evident in urban areas. It would thus be expected that urban district facilities would be subject to more pressures than would rural based facilities. And the results of the study support this: respondents from urban areas reported more social/political pressure to refer patients to hospitals than did their counterparts in rural areas.

Reporting on the pressures that communities exerted on health providers, a provider observed: *"...some of the patients think they are very important and cant be attended to a clinic...so they want you to given them a referral note for the hospital. Sometimes, we refuse and say you can be attended to here. But sometimes you have these people who make noise and especially when you are busy and there is a long line...you just give them the letter. Of course you know that at the hospital they will be turned away*...(Urban health provider).

In consent with this view, another one observed: "...*The community really gives us problems because they would sometimes not want to be at the clinic and instead prefer the hospital. Especially these apamwambas (well-to-do-people)..they are very difficult. But you have to put your foot down and say no..*" (Urban health provider). "*..and sometimes the politicians would boast that they were the owners of the clinics and we workers were employees. So they kind of try to use their political position in the community to get what they want..* (Urban health worker).

While there were such political pressures exerted on providers in urban health facilities, these were not so pronounced in rural areas. In rural areas, however, there was evidence

of social pressures occasioned by the communities' dissatisfaction with public health services and preferences for NGO hospitals services. This was represented through the community' tendency to by-pass Health Posts, so that they could be given referral letters at health centers in order to obtain NGO hospital services. As was discussed above, the perceived better quality of care in such hospitals acted as a pull factor.

7.43: Congruence of NGO managers and provider motives

Respondents from the public sector recounted the inadequacies and management difficulties of public sector employees. The inadequacies in staffing levels were compounded by staff management problems arising from the restrictive PSC rules. Such difficulties were generalized in the health sector, but were especially pronounced among staff employed in the public sector. The managers under public contracts, therefore, found it difficult to control the activities of frontline workers because of the restrictive PSC conditions.

Where a district dealt with public hospitals, such difficulties were more pronounced, since staff management problems were encountered in both districts and hospitals. In the case of NGO districts, however, they were limited since the NGO hospital had relatively more latitude of managing their providers and bringing the actions of providers in line with those of managers. As was recounted in the chapter on explicit contracts, NGO hospitals had more latitude in dispensing with workers whose performance was below par, whereas government units found it relatively more difficult to do this. Secondly the supplementation of mission provided staff alleviated provider scarcities and management difficulties in NGO hospitals.

7.50: Conclusion

The district health service capacity constraints limited the ability of frontline providers to effectively offer health services, which resulted in referral pressures on hospitals. The constraints were compounded by the limited ability of districts to manage and influence the actions of frontline health providers. While the providers were ultimately interested in advancing their own interests, at the time of their employment in the public sector,

they were more likely to respond to social than managerial rewards, which impacted on the referrals to the hospitals. The weaknesses/lack of incentives to shape providers responses had contributed to the preponderance of social over managerial incentives.

Chapter 8.00: The incentive structures facing referral hospitals and their influence on referrals

8.10: Introduction

This chapter presents findings on the incentive structures facing referral hospitals and how these impacted on referrals. The chapter starts with a presentation on the effect of block contracts and mode of payment. This is followed by a discussion of managerial incentives: disposition to increase revenues, and the difficulties of aligning managers' and frontline providers' objectives. This is followed by a discussion of the social and political pressures that hospitals face. The subsequent part of the chapter analyses how these incentive structures impact on referrals between district facilities and referral hospitals. A comparison of differences in the incentives structures facing public and NGO hospitals is included towards the end of the chapter.

8.20: The financial incentive structures

8.21: Type and method of payment of grants

The financial incentives structure and influence on referrals are summarised in Table 8.1 below. As with districts, hospitals were paid block contracts for the provision of health services, as defined in the BPC. Hospitals supplemented the grants through charging patients cost-sharing prices for the provision of basic health services, while non-basic health services were charged at (higher) cost recovery prices. The grant for referrals was paid through subventions to the districts, which would in turn remit referral grants to hospitals. The referral grants that districts paid hospitals followed historical patterns and were not related to workload.

While the hospitals complained about the grants that they received from districts, they had low bargaining powers. As already indicated above, the hospitals were unable to demonstrate the impact of referrals on their workload and hence service provision costs. Given the relatively high costs entailed with the provision of health services at hospitals,

high referral volumes to hospitals effectively meant that hospitals were subsidising the districts by providing services for cases, which should have been treated from district health facilities.

Table 8.1: Financial incentives structure and influence on referrals

Incentives	Influence on referrals
Block contracts do not encourage efficient service delivery practices: -hospitals assured of receiving grants irrespective of level of effort -relating the grant to referrals workload would result in hospitals paying districts more than they currently were.	-hospitals had attempted to rationalise referrals by: -introducing by-passing fees -closing hospital outpatient departments; -hospital preferred low referral levels and/or provided limited care to referred cases
Block contracts well less likely to rationalise referrals from district facilities -referral rationalisation was more likely where monitoring was strong -hospitals put more effort put in reporting BPC services	-Hospitals were limited in bargaining with districts by lack of information. -hospitals' inability to show the referral related workload disadvantaged them in their negotiations districts. -the difficulties of collating and analysing information made it difficult for hospitals to convince districts
Difference in the prices of basic and non-basic package services would result in hospitals: -being tempted to increase revenues by providing more non BPC -hospitals would do this by providing more of the non-basic health services	

As indicated above, block contracts did not encourage efficient production behaviours since the hospitals were assured of receiving the grants irrespective of the level of effort expended. The perverse effects of the block contracts were further accentuated by the ineffectiveness of sanctions. Although the formal contracts explicitly stated that sanctions would be applied where a provider's performance was found to be poor, sanctions had never been invoked, and for the most part, hospitals were assured of

receiving their grants irrespective of the amount of effort they put into providing health services.

The perverse incentives created by block contracts notwithstanding, hospitals further complained about the mode of payment. While the hospitals were paid directly for the provision of second and higher level referral services, grant for first level referral services were paid for through the districts. As was shown in the chapter discussing the policy of explicit contracts, the districts were given grants for the provision of primary health and first level referral services. Where a district did not have a first level referral hospital, they contracted with a referral hospital for the same. The districts in turn paid the hospital for the provision of such referral services. As indicated above, district payments to hospitals followed historical patterns.

When deciding on how much of the grant to give the hospitals, the DHBs were limited by the low overall grant and the multiplicity of financial demands. Invariably, they gave priority to meeting their immediate needs over paying for referral services. As indicated above, this situation was made worse by the lack of a method for relating the referral grant to the related hospital workload, which both DHBs and RHBs were mindful of. In the words of a hospital manager: "*...at the moment, the district is paying for 142 beds per month...so we want to try and see how many patients come from [the] DHMT. If they are 200, we should have the figures, if they are 120, we should have the figures... But if the statistics are above this, then we will have a reason to say that no, you are paying us 35% when the maximum is 40%, why don't you pay us at 40%, because the number of patients we are seeing is more. So we can have that information, we can bargain properly. Because if you went now to say you are paying us less, they will say where are the figures?. And we have only figures of referrals, they will say no, no, but we want those you admitted. ...If we don't have it [information on admissions], we will be disadvantaged.*"

8.22: The influence of financial incentives on referrals

As indicated above, the difficulties that hospital providers faced in providing health services had led to some of them attempting to relate the referral volumes to workload and consequent service costs. Given the reported high level of inappropriate referrals to hospitals, it would be expected that hospitals would provide evidence of the referral-induced workload in their negotiations with districts. However, by the time of data collection for this study, they did not have such data to use for bargaining with districts. If they had been able to directly link referral volumes from the districts to the hospital workload, they would have been able to argue their case more convincingly. As it was, the districts used the hospital's lack of information on the referral-induced workload to their advantage and paid the hospitals on their terms.

In frustration, some hospitals argued that the MOH should earmark referral grants, or send these directly to hospitals. However, while this may improve the effective allocation of funds to hospitals, it had pitfalls. Earmarking would worsen referral problems, since districts would no longer directly link the grant with referrals. It would further weaken the delineation of service provision functions between districts and hospitals and disrupt the functioning of contracts. Rather than earmarking referral funds for the hospitals, capacity development/strengthening programmes for district health services would generate better outcomes in improving referral appropriateness.

Because the referral services were paid for through block contracts, which were not related to activity levels, and in part because of the low overall grants, hospitals were tempted to provide limited care to referred patients. This disposition was accentuated by the reported high level of inappropriate referrals from the district health facilities. The tendency of hospitals to provide limited health care services for referred patients was further exacerbated by the shortages of clinical staff and difficulties of managing public service workers. The responses from providers indicated that patients often complained about the limited care provided by hospitals. Although the districts complained that hospitals provided limited care for referred patients, the hospitals could be justified

where a high proportion of such referrals were inappropriate. If the hospital were to provide the same level of care irrespective of the severity of the referred cases, they would inadvertently be sending the wrong signals that may exacerbate the referral pressures.

As was indicated in the introductory chapter on the financing policy, providers were financed for the provision of the BPC. Where a hospital provided additional services outside the BPC, these were supposed to be charged at cost recovery prices. While the provision of non-basic services may improve the financial situation of hospitals, it may lead to preserve effects such as tempting providers into maximising their non-BPC activities. Hospitals may use the distinction between basic package and non-basic packages services to their advantage and spend more of their time on non-BPC services in order to raise more revenue than they would if they provided more basic services.

While the policy was clear regarding the distinction between basic and non-basic services, providers expressed ambiguities about the delineations. They observed that there were discrepancies between services that were expected to be delivered and what was actually done at the various levels of the health system. Inappropriate referrals in part arose from this discrepancy in delineations. Referral difficulties were further accentuated by the weak links between health centres and hospitals. Effective management of a referral system would entail that cases deserving referral are appropriately and timely assessed and referred to the appropriate higher level. After a referral is received, the referral institutions should refer back to the sending institution for continuation of care, where this is needed. However, this was hardly the case.

Although the national referral hospital was supposed to provide specialised level referral services, it effectively operated as a hospital for the local district and the surrounding areas. A respondent from the hospital said: *...[the national referral hospital] is supposed to be a tertiary hospital or a national hospital where we expect referrals to come from provincial hospitals. But unfortunately because of the circumstances surrounding it, it has been forced to function at all levels: first level, second level and tertiary level.* In

response to a question on the division between district and hospital activities, a respondent observed:...*There should be a distinction between the first level patients, second level and third level...because we don't have facilities to [test that] a patient is having TB, those are not our patients. They automatically qualify to be at central hospital. And [the] central hospital is actually paid for that patient. So, I think that is the distinction in referrals. There are those that we refer, but they are not our own patients ...[they are] for central [hospitals]... [DHB Manager].*

Although the BPC delineated between the cases that hospitals and district facilities were supposed to attend to, the respondents from both hospitals and districts highlighted ambiguities. A review of responses from hospitals and districts showed that there was a high level of distrust between them, which complicated the management of referrals.

8.30: The incentive for professional advancement

8.31: Utilisation of the public sector for professional advancement

As with findings from district frontline providers, so too with those from the hospitals, health workers talked about how the public sector provided opportunities for their academic and professional advancement (Table 8.3). They observed that they had been attracted to the public sector by the better training opportunities, which were available there but not in the private sector. The public health sector was used as a ground for attaining academic qualifications, skills upgrading and professional experience for more lucrative employment opportunities in the private/NGO sector.

Stating his ambition for attaining further training in HIV/AIDS counselling, a hospital provider said: *"My ambition is to study counselling. There are too many STIs, especially HIV related cases. [For instance], last week I had five cases [and out of those], four were infected...so automatically those need counselling. Then I can go for further studies at the University of Zambia (Hospital provider).* There were many such providers who indicated that they would like to pursue counselling studies. The relatively wide

availability of HIV/AIDS related employment opportunities in the NGO sector had led many health workers into aspiring to be employed in the sector.

Other than aspiring to work in the NGO sector, other health workers observed that they would want to work in other countries, which offered better conditions of service than local employers. "...*Given a chance I would work anywhere. ...Probably going outside the country if I have a chance. I have friends who managed to get work in Botswana, Swaziland, the UK and South Africa. They all just applied and they finally made it*...(Hospital provider).

The majority of respondents interviewed indicated that they aspired to get employed in the private or NGO sector. The few who did not express such ambitions were constrained by lack of opportunities, age-related considerations and family responsibilities. Expressing such sentiments, a respondent said, "...*I don't even wish to go and work outside and at my age, I feel time of going outside has passed. So I will continue until I retire. ...I enjoy [my work]. There was a time I was thinking of [going to work outside the country]. That was a long time ago when we were in rural areas...when I was in my twenties.... I was wishing if I was staying in town, I would leave the government, but the time I came I thought it was too late...[to look for employment outside the country]*".

Others talked about the difficulties of accessing the means to enable them pursue their interests. Talking about the difficulties of accessing financial resources in order to realise training ambitions, one provider said: *"The major problem is financial. Financially, you need to plan everything...the hospital has a lot of projects...so resources are limited. If resources can allow, obviously I can go [to college for further training]..".* (Hospital provider). Others talked about the limited places in colleges, which hindered them from attaining their ambitions. In the words of one provider: *"..you know sometimes you apply and they [college] only accept a few people, because they have limited places. You can apply, and maybe they don't pick you.." (Hospital provider).*

Table 8.2: Incentive structures facing frontline providers and their influence on referrals

Incentives	Risks and influence on referrals
The motivation for personal advancement -Advancement of academic qualifications -Advancement of professional qualifications	-Skills gained from training facilities enhanced the capacity of providers
-Providers expressed empathy for the community	-Because of disposition to serve communities: -providers were reluctant to perform filtering role of referred patients -this perpetuated referral pressures on the hospitals.
-The institutional sanctions and rewards were weak	
-The adverse working conditions also compounded the negative work environment.	-Weak institution rewards and sanctions for perpetuated referral problems
-The social rewards and sanction had effective impact on provider behaviour	-Strong social reward and sanction also perpetuated referral problems

While they aspired to get employment outside the public sector, the providers who had previously worked in hospitals indicated that they preferred the district to the hospital working environment. For instance, a district provider, who had previously worked in a hospital observed: *"At the hospital, we were just writing admission notes, treatment, same routine work everyday, it wasn't challenging. So it had become a routine, so I wanted to refresh my mind by getting involved in general medicine, which I am doing now at the clinic (Health centre provider).*

In response to a question about whether he found the working environment at the clinic more interesting than at the hospital, a respondent said: *Yes, it is more interesting here because am exposed to many situations and meet many people. Some come from Lusaka, like you have come yourself. If I were in the hospital, I would not have seen you, because you were going to end up in administration (Health centre provider).*

8.32: The influence of professional incentives on referrals

The providers' incentives to advance their academic and professional aspirations generated positive effects on referrals by raising their competencies and hence improving service delivery capacity. With the improved competencies, health workers providers would be more discerning in deciding on the appropriateness of referrals and provide appropriate care for appropriate referrals. Talking about the skills learned from such in-service workshops, a respondent said: *"...Through the workshop that we attend, where there are senior doctors who discuss issues, we are able determine, for instance what needs to be done when you have a case. Such meetings have helped to improve our abilities as clinical officers in the hospital...*(Hospital provider).

Similarly another provider said: *"...Nowadays because of the low standards in colleges you find that by the time you are graduating, you don't really grasp many of the issues, hence working here in the hospital, where you interact with many doctors, you learn from them, so the education kind of continues and that improves our skills. We are able to provide the necessary care when a patient comes from the district...*(Hospital provider)

While in-service training opportunities had resulted in improved competencies of the providers, this was sometimes undermined by the limited facilities in their working environment. Thus although they could be technically competent, such limitations negatively impacted on the effectiveness with which they provided health services. Such factors included: lack of diagnostic facilities, and limited availability of clinicians. Hospital respondents also observed that limited competencies in district health facilities complicated their work, a point that was noted by district respondents too.

Hospital respondents had strong views about the referrals from districts, most of which they thought were inappropriate. *"...at the hospital, we feel that districts can do better to manage most of the cases they send here. The problem is that they are just used to sending patients to the hospital, even where it is not necessary. ...You find that a patient is sent here for simple things like malaria...now surely malaria can be handled at the*

clinic, and it does not have to be sent here. But, it's like they just have a habit of sending anyone to the hospital, even where it is not necessary..."(Hospital provider).

Another one echoed similar sentiments, but attributed the problem to both the patients and district providers: *"...the problem is that some of the patients think they are too important to be attended to at the clinic. They would rather they came to the UTH so that they see a doctor. What they don't realised is that providing health service at the hospital is expensive.... The nurses at the clinics complicate things by agreeing to refer such patients instead of treating them there.."* (Hospital provider).

However, district respondents objected to the hospital allegation of inappropriate referrals to hospitals. In response to a question about why hospital staff held the view that health centres made unnecessary referrals, a respondent observed that...*I don't know why they hold it but even us at this clinic we receive referrals from X or Y [feeder clinics] clinic, sometimes when you look at the condition, sometimes we also say that it is very unnecessary for them to have referred that particular condition. But there are also conditions that we see that this condition it is better managed here than at the smaller health centres.."* (District provider).

Another respondent echoed similar views: "*...I don't think it is very correct and I have had colleagues I have worked with at the hospital who think we are not doing as much as we used to.... I think the main reason why we send is for investigation purposes, like if we suspect it is meningitis, why keep a patient here when I know I won't do a lumber puncture. That is where the problem is, we lack some of the equipment, that is why it looks irrelevant to just send a patient for x-ray and ask a doctor to read it on the screen for us. Well, one very important thing is when you refer a case to hospital, it is either, you didn't know the diagnosis or you didn't know the management...*". (District provider)

8.40: Contrasts between public and NGO contracts

This section discusses the differences in the incentive structures facing NGO and public hospitals (Table 8.4). The section outlines the socials and political significance of public hospitals, which makes them more vulnerable to political influences than NGO hospitals. Thereafter the problems caused by the divergence of objectives between managers and frontline health providers are discussed. The impact on referrals of the NGO objective to serve deprived communities and reported community perception of better quality of care in mission hospitals are also discussed.

8.41: The preponderance of social/political pressures

Hospitals are politically important symbols and governments have an interest in wanting to demonstrate that their involvement in the running of such institutions is to the advantage of the communities. The importance of hospital as symbols of political authority was evident from the interviews with hospital respondents. This incessant political intercession in the running of hospitals limited the autonomy of management who felt compelled to act in line with political dictates. Such pressures were more prevalent in government than NGO hospitals. This arose not only from the political importance of urban located hospitals but also because urban communities tended to be more vocal and demanding than rural populations.

In such a setting, therefore, it would be expected that referral pressures would be more pronounced for urban than rural based hospitals. Indeed, a review of data showed that both social and political pressures where more evident among urban than rural based hospitals. It may be argued that both social and political influences need not necessarily translate into referral pressures on hospitals, especially where hospitals, in a bid to curtail unbridled access to hospitals acted to ensure that only appropriate referrals were accepted at hospitals. Although managers may be so disposed, however, the frontline workers were ultimately the ones responsible for filtering referrals. As will be demonstrated below, however, the actions of managers and frontline providers were hardly in harmony. And where providers did not act in line with their managers' interest to rationalize hospital attendances, referrals pressures on hospitals were perpetuated.

Table 8.3: Differences in incentive structures: comparison of NGO and Public hospitals

Public hospitals	NGO hospitals
Public hospitals were strong symbols of power and were used as such by politicians.	NGO hospitals were less affected by political influences, but by mission values.
Reported referral difficulties emanating from communities: -preference for hospital over health facility level care -High morbidity and mortality level exerted pressure on hospitals	Reported referral difficulties emanating from communities: -Providers indicated that communities preferred NGO over public hospitals -Providers reported that communities perceived quality of care in NGOs to be better than public hospitals
The predominance of PSC workers in public hospitals created management difficulties exemplified by divergences between managers and staff incentives: -Multiple employer categories had complicated staff management -Cumbersome PSC conditions of service created difficulties	Divergences between managers' and frontline providers' incentives were less likely in NGO hospitals, because: -were more likely to employ staff who shared denomination values -dispensed with staff relatively easily -had specially designated management staff

8.42: Divergences in provider and managers' objectives

It was noted above that referrals to hospitals could be rationalized if the managers' objective to reduce inappropriate referrals were backed by similar interest among frontline providers. However, the study demonstrated that the actions of frontline providers were hardly in line with their managers' expectations. For instance, whereas the managers were more likely to report the financial difficulties that they faced in providing services, the frontline providers reported the social and health service related costs that communities faced in accessing health services. From the responses of the providers, it was clear that they were performing a social function in the sense of acceding to community demands, as opposed to meeting their managers' objectives. And where such was the case, referral difficulties would be pronounced.

Whereas, there was a divergence of objectives between government hospital managers and frontline providers, this was not the case in mission hospitals. In mission hospitals, there was a high likelihood of managers' objectives being in line with those of frontline workers. This in part arose from the preponderance of mission governance bodies over government structures. As was indicated above in the chapter on the policy of explicit contracts, although all hospitals were supposed to be governed by government appointed hospital boards, in mission hospitals, these ran side by side with mission bodies, which had been there before the former and were more influential on the operations of the hospitals. The prominence of mission boards in such hospitals, served to ensure that the staff acted in a manner that furthered the mission objectives of providing services to deprived communities. Thus whereas in urban hospitals, the discordance in manager's and provider's objectives occasioned referral pressures on hospitals, for mission facilities, it was the accord in the objectives of managers and providers, in the sense of providing services to deprived communities that occasioned referral difficulties.

That frontline providers in public hospitals were more likely to pursue objectives that were not in line with their managers' objectives was amply demonstrated by the case at one public hospital, were providers were accused of moonlighting. As was indicated above, the failure of the upgrading programme to relieve referral pressures on UTH was followed by a subsequent referral strategy, which entailed closing the hospital OPD and its replacement with a district managed HAHC. The HAHC had just been instituted by the time of the study, but there were misgivings about its effectiveness. Managers at the hospital observed that closing the OPD had not helped matters since referred patients had switched from the OPD to the casualty wing. The doctors attached to the HAHC at UTH were further accused of moonlighting and not spending much time there. The district was not able to effectively monitor activities of the doctors attached to the unit and even if they did, the restrictive PSC conditions limited the extent to which the problem could be resolved.

The difficulties which DHBs faced in controlling their staff could be extended to the health centre level, where hospitals observed that DHBs had done little to monitor and reorient the referral practices of frontline providers. While, this could be valid, it is also true that DHBs did not have effective systems for monitoring the referral practices of their workers. Even in cases where staff were interested in making appropriate referrals, capacity problems in the health centres limited the extent to which this could be done.

8.43: Social deprivation of communities

The mission hospital sector was established to principally cater for communities that were underserved in terms of social services. Such mission run health facilities therefore, tended to be predominantly located in rural areas. While resource constraints were common to providers under government contracts in both rural and urban areas, these were more acute in the former. The combination of poor public sector facilities, poverty and high morbidity burden in the rural setting increased the referral pressures on the NGO hospital. The hospital respondents observed that the problem of referral pressures from the district was a reflection of the high level of deprivation in the served communities and poor quality of health services in the feeder district health facilities.

The combination of community deprivation and mission values of providing services to marginal areas led to referral pressures on the hospital being sustained, since frontline providers in mission hospitals were less likely to deter access to hospital services as that would go against the mission dictates of servicing communities.

8.44: Reported perception of quality of health care

According to the providers interviewed, the communities rated the quality of mission hospital services to be high, which resulted in high demand for such services. Because of the reported perception of better quality care in mission hospitals, communities were reported to be by-passing community health workers, in preference to health centers from where they could be referred to the hospital. The by-pass fees that health centres charged were too low and not able to discourage by-passers.

There were differences in attitudes towards the uptake of traditional medications between rural and urban areas. These practices were more pronounced in rural areas and to the extent that such practices delayed access to health services, they resulted in medical complications, which imposed referral pressures. NGO hospitals were affected by such practices to a much greater extent than public hospitals. ...*Yes, I think the major problem with the community is that usually people try to use traditional medicine. Its only after they see that traditional is not working that's when they rush to the hospitals, by that time the condition might have worsened. Most of the maternal deaths are usually due to the reasons, that they come a bit late to the hospital. Even though we are talking about this, but its difficult to change an attitude that has been there for some time. But, people are responding a bit, but there are always those cases that report very late at our health centres, and even though we refer them to the hospitals its very late to assist them*...(Frontline provider).

In response to a question on the sort of referral problems that the hospitals faced, a provider said: "...*Sometime back, there were patients who could be referred to this hospital just for a simple test. You ask them, why have you been let to come this far for malaria test...sometimes they would say the clinics don't have reagents. So in such cases, the patients were losing a lot of money spending on transport....just to do a malaria test or HP, which could easily be done at the clinic.*."(NGO hospital provider). Similarly another respondent said: "...*many patients like coming here [to NGO hospital like] because the of availability of drugs and the doctors attend to them with patience...(NGO hospital provider)*.

Sometimes providers empathized with communities regarding the difficulties that they faced in accessing drugs from health centers. "...*for instance at the moment, I think there was one issue whereby TB patients come to this clinic, but afterwards, they are supposed to go back after they are discharged to continue the medication. But there had been a problem whereby the prescribed drugs are not available at the clinic*....(NGO Hospital provider). In such cases, the communities would invariably exert pressure on hospital providers so that they were referred to the hospital.

8.50: Conclusion

The type and mode of referral contract payments disadvantaged the hospitals because they provided referral services while they got minimum grants received from the districts. In reaction to inappropriate referrals, hospitals had implemented strategies such as: by-pass fees; and closing outpatient departments. However, referral difficulties had persisted because of the difficulties of managing frontline providers coupled with strong social rewards and penalties. A comparison of NGO and public hospitals showed that the latter had relatively less appropriate referrals because of the relatively high level of deprivation and lower quality of health centre services in rural areas.

Chapter 9.00: Discussion and conclusions

9.10: Introduction

This chapter discusses the methods, conceptual framework and findings of the study. The first part summarises the key findings of the study. This leads to analyses of the methodology, focusing on the value of combining quantitative and qualitative methods and difficulties of using routine hospital data to study referrals. This is followed by a discussion of the usefulness of New Institutional Economics (NIE) to studying contracting in a LMIC setting. The latter part discusses the findings on the policy of explicit contracts and how incentives structures impact on referrals. The last section of the chapter discusses the contribution of the study to knowledge on the subject of referrals and internal contracts. Each section of the chapter ends with conclusions on: the usefulness of combining qualitative and quantitative data; the net effect of explicit contracts between districts and hospitals; the incentive structures and their effect on referral decisions; the differences in the referral levels and patterns under varying contract types; and the contribution of the study to knowledge.

9.20: Summary of the study findings

Chapter 5 of the findings section presented findings on the policy of explicit contracts between districts and referral hospitals. The chapter outlined the environmental context in which contracting was undertaken by discussing the spatial distribution and ownership of health facilities. This led to a discussion of the transaction context, which focused on: the nature of contracts, provider autonomy, and transaction attributes. The introduction of explicit contracts in the health sector was expected to improve the efficiency and effectiveness of service delivery. The findings showed that contracting had resulted in the delineation of roles between hospital and district facilities; acted as a means for rationalising access to hospitals; played an assurance role regarding the obligations of contracting parties; and led to increased interaction between the contracting parties. However, the policy had been attenuated by: lack/weak penalties and rewards; staff scarcities and management difficulties; funding constraints; and locked-in relationships. Arising from the locked-in relationships, both DHBs and RHBs accused each other of

opportunistic behaviours in relation to referral decision-making and payments. A comparison of contracts between NGO and public hospitals showed that: there had been changes with regard to delineation of service provision; Contracts with NGO hospitals were adversely affected by the deprived conditions of the rural communities; districts well more disposed to contracting with NGO than public hospitals and NGO hospital facilities had more latitude in dealing with staffing difficulties.

Chapter 6 presented findings on the patterns and levels of referrals between district health facilities and referral hospitals. In assessing referral level and patterns, six diseases/health conditions were used as tracers, while the assessment of referral appropriateness was done by using both expert and indicator-based methods. The findings showed that the proportion of the selected diseases/health conditions presented to both upgraded and non-upgraded hospitals were not very different. Both hospitals had high proportions of primary health conditions. Although referrals to upgraded hospitals were more likely to be appropriate than those to non-upgraded hospitals, the differences were not statistically significant. There were also no major differences in the severity of cases that were referred to the upgraded and non-upgraded hospitals. However, a comparison of referral appropriateness between public and NGO hospitals showed consistent differences. The referrals were more appropriate for public than NGO hospitals.

Chapter 7 presented findings on the incentive structures facing districts and how these impacted on referrals. The chapter outlined the perverse incentives of block contracts, which was followed by a discussion of managerial incentives and social incentives which districts faced and how these impacted on referrals between districts and hospitals. The study findings showed that the district health service delivery capacity constraints limited the ability of frontline providers to effectively offer health services, which resulted in referral pressures on hospitals. The constraints were compounded by the tendency of frontline providers to respond to social than organisational incentives. The weaknesses/lack of rewards and penalties to influence the behaviour of providers accentuated the preponderance of social over managerial incentives.

Chapter 8 of the findings section presented findings on the incentive structures facing referral hospitals and how these impacted on referrals. The chapter discussed the effect of block contracts and mode of payment on referrals. This was followed by a discussion of managerial, provider and social incentives, and how these impacted on referrals. The hospitals were paid block contracts, which did not encourage efficient service delivery practices. While receiving high referral volumes from districts, the hospitals faced financial constraints. The hospitals were limited in bargaining with districts by the lack of information, which was made difficult by the cost of collating and analysing data. The hospital frontline providers responded more to social incentives than organisational incentives. Because of disposition to serve communities, providers were less likely to perform a filtering role of referred patients which perpetuated referral pressures on the hospitals.

9.30: What were the benefits and difficulties of contracting?

9.31: The benefits of contracting

The introduction of explicit contracts in the health sector was marked by the granting of autonomy to provider units and delineation of functions among the various actors in the health sector. At the central level, such delineation entailed the separation of financing and purchasing roles between the MOH and the CBOH respectively. The MOH was expected to concentrate on resource mobilisation and policy setting, while the CBOH was contracted to provide services. The CBOH was paralleled with boards at both the district and hospital levels.

Delineation in the provision of health services was effected at the local levels too. Prior to the introduction of the policy of internal referral contracts, district health facilities were part of local authorities. However, with the implementation of health reforms, the responsibility of providing health services was taken away from local authorities and given to autonomous DHBs, which acted on behalf of the MOH. It was envisaged that the creation of DHBs would strengthen the gate-keeping role of district facilities for the hospital sector.

The DHB was given the responsibility of purchasing health services on behalf of the local populations. Explicit contracts were entered into with providers, which included referral hospitals, for the provision of services that the districts were not able to offer. With the delineation of roles, districts and hospitals were expected to concentrate on their assigned responsibilities. Being purchasers of health services, districts were expected to act in the interest of the population, while hospitals would concentrate on providing referral services efficiently. To this end, the roles of districts and hospitals were rationalised through the cessation of promotional PHC service provision from hospital premises, an activity which was delegated to the DHBs. Accordingly, hospitals progressively closed hospital OPD units or turned over the management of OPDs to district authorities.

As was indicated in the findings section, the introduction of explicit contracts provided a basis for discussion between districts and hospitals, a fact acknowledged by both DHBs and RHBs. The fact that DHBs and RHBs were able to use contracts as a basis of discourse on referrals, attests to the potential of explicit contracts being a tool for managing relationships among providers in the health sector. Associated with the delineation of responsibilities among providers were the accompanying changes in the payment systems. Although there were no effective means of assessing how much value they were getting in return for their referral grants, DHBs used other mechanisms such as demanding feedback from RHBs. The insistence on feed-back from the hospitals was consistent across the study sites and reflected the desire of districts to ensure that they got value for the money they spent on the purchase of hospital beds.

9.32: The difficulties of contracting

The districts and hospitals were in a locked relationship, from which they were not able to exit. Except in rural settings, where districts could contract with both NGO and government hospitals, there was no choice about the parties to contract with. The locked-in relationship resulted in opportunistic tendencies on both parties, such as the practice by hospitals not to provide feed-back to districts, and the habit of districts to

refer at will, regardless of how much they paid. As the chapter on referral levels and patterns showed, some referral were inappropriate and hence the minimum grants paid to hospitals effectively meant that the hospitals were subsiding districts. The high level of inappropriate referrals compounded the high costs of providing hospital services. While both districts and hospitals faced financial constraints, the impact was greater on the latter. Conventionally the unit costs for similar health services are higher in hospital than low level health facilities. It was apparent that the DHBs were not purchasing services even- handedly from referral levels but were preserving money for their 'own' facilities, and did not seem to care much about the hospital's financing problem. The DHB's perspective was that of a district health service provider rather than purchaser of services for the district population. This was a flaw in the arrangement since the districts are ideally supposed to be purchasers of health services and use their powers as purchasers in their negotiations with hospitals.

The type of hospital ownership - that is whether they were government or NGO owned - also had a bearing on the outcome of contracts. Although the church administered hospitals had been brought under the ambit of the CBOH and were supposed to have had government appointed boards, they had continued operating under church boards, which had more authority over the affairs of the hospitals. The preponderance of mission over government boards could, however, be cited as a source of greater autonomy as contrasted with government hospitals where management teams were appointed by the Minister of Health.

The devolution of autonomy to districts and hospitals was supposed to be supported by the granting of corresponding authorities over the use of inputs. However, the supply and management of staff had remained problematic, causing difficulties for the implementation and management of the reform agenda. Both districts and hospitals experienced difficulties regarding the centralised recruitment, deployment and management of staff. The scarcities of staff in the public health sector reflects an underlying problem with upstream contracts between the CBOH and districts/hospitals. This was further compounded by the staff management difficulties at the local level.

Managers highlighted the difficulties of engaging and retaining staff and the accompanying restrictive employment conditions. These difficulties were for instance manifested in a divergence of incentives to which the managers and providers responded, as will be discussed further below.

The effectiveness of referral contracts was further undermined by the lack of effective penalties and rewards. Such sanctions could have impacted on referrals by making both districts and hospital more responsive to contract provisions. For instance, penalties could have been imposed on districts which made inappropriate referrals. Equally, the hospitals would have been sanctioned for inability to provide the commensurate services for referred cases, and flouting the financing policy through, for instance surcharging referred cases. Although the contract formats formally stipulated that sanctions could be imposed on both districts and hospitals, that had never been done and the contracts were largely symbolic.

Conclusion: The policy of explicit contracts was resulted in the granting of autonomy to provider units and delineation of responsibilities between districts and hospitals, whereas the former purchased while the latter provided referral services, and enhanced interest in discussing referral issues. However, the policy was attenuated by the limited choice among contracting parties, lack of rewards and penalties to make it more effective, and differences in incentives facing managers and providers.

9.40: What were the factors that impacted on referrals?

9.41: The effect of the contract payment method

Both the hospitals and districts were budget holders and received block grants from the CBOH. As with other contracts, which are based on block payments, this posed difficulties for referral contracts. The respondents' reference to always being assured of grants (irrespective of what they did) was illustrative of such problems. The perverse incentives in-built in block payment methods were further accentuated by the lack of penalties and rewards. As was indicated above, although the contracts specified that

funding would be withdrawn from providers who faltered in meeting their mandates, the respondents observed that this had never happened, and contracting parties continued their business with no possibility of penalties or rewards for their actions.

Both districts and hospitals bore the brunt of block contracts as they had to provide services for a fixed grant. As was indicated above, to the extent that hospitals provided services for referred cases, they could have been subsidising the districts, which referred at will, for a fixed amount. The risk was shifted onto the hospitals, because services were provided irrespective of the level of funding from districts. The hospitals received the same referral grant from DHBs, no matter the level of services provided and could not secure more by providing better services. The method of payment, similarly did not impact on the behaviour of hospitals. The hospitals were not compelled to provide any better referral services than they were doing. However, even if the hospital managers were to aspire to provider better referral services, the tendency of providers to respond more to social than organisational incentives limited the extent to which this could be done.

9.42: The influence of rewards and penalties: the missing link?

An overall assessment of the impact of the policy of internal contracts would indicate that it had limited effect on referrals. That the policy of internal contracts did not effectively impact on referrals between districts and hospitals could in part be attributed to the lack of penalties and rewards. This was also reflected in the way both districts and managers related to the central agencies of the CBOH and MOH. Although the authorities of districts and hospitals had been devolved, the CBOH could have played a better stewardship role, which coupled with effective penalties and rewards would have strengthened the referral contracts.

Had the CBOH fulfilled its stewardship role effectively, it could have been more effective in resolving contentions between districts and hospitals pertaining to the level and timing of referral grants. Such a stewardship role would have entailed the MOH supporting both districts and hospitals in carrying out their mandates. This would have been facilitated by the establishment of an information system to manage referrals

between districts and hospitals, which by the time of the study had, however, not been done. Supported by such an information system, sanctions would have generated better referral contracts. For instance, districts with higher referral rates could have been compelled to pay larger grants to hospitals, while there would also have been sanctions for hospitals not providing feedback and appropriate care for referred cases. However, and as the data showed, improving the referral system goes beyond the hospital and district managers and more importantly entails understanding the incentive structures facing the frontline providers, both at district and hospital levels.

9.43: Frontline health workers' referral behaviour: in whose interest?

As the findings section showed, while the institutional rewards and penalties were ineffective in effecting the appropriate referral behaviours from frontline providers, the social rewards and penalties impacted on providers' behaviour. The lack of strong institutional incentives, and apparently strong social incentives created difficulties for managers. The managers were more likely to be concerned about the costs of providing services than the frontline providers. The managers often talked about the financial constraints that they faced, while providers were more likely to talk about the financial difficulties that communities faced in accessing health services. The interests of communities featured prominently in the referral decision-making process of the providers.

The providers consistently made reference to acting in the interest of the community, and rarely mentioned acting in line with the wishes of their managers. The tendency to act more in accordance with the community interests was buttressed by the social reward and penalty systems that they identified (satisfied clients spread news about the competency of providers and likely news about negative health outcomes such as death were relayed in communities). This was in contrast with the absence/weaknesses of institutional reward/penalties, where the reward was a salary, which accrued to everyone, irrespective of effort. The only referral specific reward were commendations, which were directed at heads of health centres and not individual providers.

Although the predisposition of frontline providers to act in line with the interests of the communities they served could be taken to be a positive outcome in the sense of being responsive to community interests, the resultant referral pressures were disruptive to hospital service provision. The providers were more likely to give such expressions as "wanting to help the community", "feel part of the society" "doing my best [for the community]". The providers' obligations to the society were pitted against the objectives of their managers, who may have had different priorities. Where the district managers and providers shared the same objectives, it would be expected that referrals would more appropriate. However, where this was not the case, providers were more likely to positively respond to social incentives.

While their responses suggested that they mostly acted in socially expected ways, the providers were also conscious of balancing the needs of patients with the objectives and constraints facing health facilities. Thus, whereas patients would expect to be referred to hospitals, which were perceived to provide better quality of care, the providers were mindful of the pressures inappropriate referrals posed on the health sector. However, the absence of effective sanctions for deterring inappropriate referrals by providers resulted in the patients' requests for referral being met by providers.

9.44: Political influences

The impact of provider behaviour on referrals was further buttressed by the political influences in the management of both district and hospital facilities. As was identified above, both the hospital and district boards were appointed by the minister, so too were the management teams. Thus, although both districts and hospitals were supposed to be autonomous, de facto they were managed by the political establishment and this meant that their decision making space was circumscribed.

The influence of the political establishment in the appointment of boards meant the latter often acted in line with the political dictates. The boards were more likely to penalise actions that were perceived to be inimical to the fortunes of the political party in government. Any actions that won praise from the community were more likely to be

appreciated by the board (for hospitals, this would translate into high referral levels from the districts).

The appointment of management teams by the minister left health services at the mercy of politicians and this was reflected in managers being rewarded for actions that appealed to the population and thus to the appointing authorities. In like manner, managers were also penalised for actions that were perceived to be against the general population interest and thus managers were more likely to avoid actions that could upset the appointing authorities.

Conclusion: The factors accounting for inappropriate referrals to hospitals were: the effects of block contracts; differences in the incentives facing managers and providers; and ineffective rewards and penalties.

9.50: Under what type of contract setting were referrals more appropriate?

9.51: Upgraded versus non-upgraded district capacity

The outcome of contracting is in part determined by the context in which it is implemented. For referral contracts, the delivery capacity of health units has a bearing on the referral outcomes. Referrals would be expected to be more appropriate for districts whose facilities had better delivery capacity, such as those with upgraded facilities. A comparison of referral appropriateness between upgraded districts and non-upgraded districts showed that there were no significant differences.

While referrals would ideally be expected to be more appropriate for district with upgraded capacity, this was undermined by: resource constraints; scarcities and difficulties of managing providers; social incentives for referral; prior unmet need for health services and high levels of morbidity in the client populations. The problem of staff availability and management were recounted for both types of districts. Despite the augmentation of staff in upgraded facilities, referral pressures had persisted at the UTH.

This had led to the implementation of a Hospital Affiliated Health Centre (HAHC). Although the HAHC had just been introduced at the time of data collection for this study, respondents observed that the strategy also had limited impact on referrals. The hospital respondents observed that doctors deployed to the hospital often absconded. The district did not have the capacity to effectively monitor doctors attached to the unit, and this was compounded by the restrictive PSC conditions.

9.52: Public versus NGO hospitals

As was identified in the findings section, NGOs tend to be predominantly concentrated in underserved areas. The NGOs are also renowned for producing services more efficiently than public providers. To the extent that inappropriate referrals are a manifestation of inefficiency, it would be expected that NGO hospitals would be more fastidious about the referrals appropriateness and hence engage the districts more in order to achieve this. A comparison of the appropriateness of referrals between NGO and public hospitals showed that there were significant differences. The referrals under public hospital contracts were more appropriate than those under NGO hospital contracts. The major factors accounting for these differences were: differences in the quality of health services; varying levels of deprivation and morbidity in the catchment populations; and community preference for NGO hospital services.

The major reason for the high level of referrals from health centres to the NGO hospital was the relatively low quality of services in the former. This manifested in the lack of adequate diagnostic and medical facilities and acute shortages of providers. The poor quality of health services was compounded by the high incidence of co-morbidities that were reported to be prevalent in the rural area. The combination of low provider competence and high incidence of co-morbidities resulted in high referral levels to the NGO hospital.

The low capacities in health centres were compounded by the limited level of supervision by district offices. While supervisory visits could be said to be rare for both urban and rural health facilities, this was more pronounced in the latter. The health centres in rural

areas were less likely to be visited by district managers, and thus had less opportunities of improving health service delivery capacity. Not only did the geographical distance limit supervisory visits, rural based health centres also faced more acute resource constraints than urban located facilities, which limited their service delivery capacity, and consequently resulted in high referral volumes to the hospital.

The referral pressures on the NGO hospital could also have been occasioned by earlier low level PHC predisposition. Prior to the health reforms, NGO hospitals provided both health promotion and curative health services. This practice of providing such PHC services was supposed to have ceased following the introduction of health reforms. However, it is likely that the practice was perpetuated because of: the preponderance of NGO governing boards, which favoured provision of PHC; the remote location of NGO hospitals and thus limited interaction with policy makers on account of high monitoring costs; capacity limitations in feeder health centres; and community preference for NGO hospital services. Furthermore, the better quality of services in NGO hospitals was mirrored by low quality in public district health centres, which was exemplified by acute shortages of staff, especially clinical officers.

Conclusion I: There were no significant differences in referral appropriateness between districts with improved capacity because of: scarcities and difficulties of managing providers; prior unmet need for health services and high morbidity levels.

Conclusion II: There was a lower level of referral appropriateness among NGO than public hospitals because of: low quality of district health services; high levels of social deprivation; limited ability to monitor activities in rural areas; NGO facilities' primary health care orientation, and community preference for NGO facilities.

9.60: How useful was NIE in analysing referral contracts?

The study used the theoretical body of NIE to analyse the findings. While NIE is an umbrella body encompassing four theoretical strands of public choice, property rights,

transaction cost economics (TCE) and principal-agent (PA) theories, this study mainly drew from the last two, TCE and PA theories. By virtue of contracting for referrals between district health facilities and referral hospitals, there is a transaction, to which transaction cost economics can be applied. The study of transaction costs entails looking at the facets of asset-specificity, opportunism, bounded rationality, and uncertainty. Opportunism on the part of DHBs was manifested in the practice of inappropriate referrals and paying hospitals minimum grants for hospital services. The districts used their knowledge that hospitals had no basis for demanding higher payments for referrals to their advantage. For hospitals, opportunism was manifested in the reported less effective treatment of referral cases and non-provision of feed-back to referring districts.

There were information asymmetries both within and between districts and hospitals. On the part of the districts, while the frontline providers had more information regarding the condition of referral cases, the district did not, which created uncertainty. In like manner, there was also uncertainty between hospital authorities and frontline providers: the providers knew the condition of the referred cases on presentation to the hospital, but the hospital managers did not. There was also uncertainty between the districts and hospitals: the hospital had no way of ascertaining whether the district had the competencies to provide services for which referral was sought. These levels of information asymmetries resulted in uncertainty for both hospitals and districts, and as such led to difficulties in the management of referrals.

Although, it was relatively easy to approximate the transaction cost attributes of bounded rationality, opportunism and uncertainty to referral contracts, adaptation of the transaction attribute of asset-specificity was not. For asset-specificity, the study concentrated on human resource scarcities and staff management difficulties. The problem of scarcities of medical staff and the related staff management difficulties were pervasive in the health sector and presented major problems for managers of both district and hospital health facilities. .

In identifying the principal-agent problems, reliance was placed on the flow of funds and results of interviews with policy makers, managers/directors and frontline health providers. The principal-agent relationships were traced at two levels, upstream contracts between DHBs/RHBs and the CBOH/MOH, and downstream contracts between DHBs and RHBs and between managers/directors and frontline providers. The other level where a principal-agent relationship was evident was between frontline providers and the community.

Principal-agent problems between districts and hospitals arose from two angles. While both districts and hospitals shared a common objective of providing health services against limited resources, the gravity of resource constraints affected the relationship between them. The decision to refer and provide care for referred patients exposed an agency problem. The districts were consistently accused of making inappropriate referrals. The hospitals were unable to ascertain whether referred patients' conditions warranted referral. Districts on their part argued that hospitals did not provide the requisite services for referred patients and feedback to referring health centres. The problem of inappropriate referrals and lack of adequate care and feedback for referred patients at hospitals was compounded by the limited ability of both districts and hospitals to effectively manage the activities of subordinate frontline providers, who may pursue divergent objectives. As is discussed below under incentive structures and referral decisions, it was evident that frontline providers were more likely to respond to social incentives than serve managers' aims.

Conclusion: The NIE was useful in understanding the difficulties of referral contracts. By tracing the principal-agent relationships, it was possible to identify the incentive structures facing districts and hospitals and illustrate how these affected referrals.

9.70: How did the study contribute to knowledge?

The study contributed to knowledge on the subject of internal contracts and referrals in two ways. Firstly, the study analysed the difficulties of managing referrals from an institutional perspective, and secondly it demonstrated how a combination of qualitative

and qualitative methods could be used to understand the difficulties of contracts and illustrate the extent of such problems.

As was illustrated above, the qualitative methodology was chosen for its ability to explore the complexities of process issues, while the quantitative methodology permitted the empirical illustration of the levels and patterns of referrals. While the qualitative data were used to describe the difficulties of internal contracts, quantitative data were used to demonstrate the extent of differences in the patterns and levels of referrals.

For the qualitative methods, data were collected from policy makers, district and hospital managers and frontline health providers. These sources of data on referrals illuminated the analysis of referral contracts. The quantitative data from hospital records were used to illustrate the extent of referral problems by quantifying the patterns and levels of referrals. While the difficulties of using routinely collected health facility data are well documented, the study showed how such data could be used to illustrate the problem of referrals, by comparing aggregated data by disease/health condition to describe the morbidity profile, and patient data to generate indicators of referral appropriateness.

That referral problems are among the key causes and manifestation of inefficiencies in the health sector is illustrated by the various strategies that have been implemented to resolve these. However, previous assessment of referrals concentrated on structural determinants and health seeking behaviour of client populations, and implicitly assumed institutions away. This study adopted a different approach in investigating referrals by using NIE to focus on the institutional setting. This was done by studying the environmental factors; contracting/transaction attributes; principal-agent relationships, and incentive structures; and showing how these impacted on referrals.

The study further demonstrated the impact on referrals of different contract settings. A comparison of districts with upgraded and those without upgraded facilities showed that there were no major differences in referral appropriateness. The ability of contracts with upgraded facilities to influence referrals had been militated by the social incentives

facing frontline providers; high level of unmet need prior to the health centre upgrading programme, and weak institutional rewards and penalties.

While there were no major differences in the appropriateness of referrals between upgraded and non-upgraded districts, there were between public and NGO contracts. The NGO hospital consistently had lower levels of appropriateness than public hospitals. The relatively high levels of inappropriate referrals for the NGO hospital were caused by poor quality of services in district health facilities, high level of deprivation and community preferences.

Conclusion: The study contributed to knowledge by undertaking an institutional analysis of referral contracts using a combination of qualitative and quantitative data.

Chapter 9.00: Study limitations and recommendations

Limitations

Although this study assessed the difficulties of referrals between districts and hospitals through the lenses of contracting, it should be pointed out the contracting is but one of a myriad of factors that impact on referrals. As was indicated in the literature section, there are individual/household; community; provider-based; and institutional determinants that affect referrals. A holistic study of referrals would entail assessing all the influences on referrals. This study took an institutional analysis of referrals, by looking at the incentive structures facing hospitals and districts, and thus left out the other factors.

Having been based on case studies, the research could be criticised on the grounds of the findings not being generalisable. However, and as was demonstrated in the methods and discussion sections, there is no attempt to generalise from case studies. The study sought to have an in-depth understanding of the referral contracts, through the adoption of an appropriate analytical framework and research design. The qualitative data from in-depth interviews was supplemented with hospital based utilisation and inpatient data. While the qualitative data explored the processes surrounding contracting for referrals, the quantitative data was used to assess the levels and patterns of referrals. The data were based on secondary sources, which could be imbued with deficiencies. In recognition of these potential weaknesses, two complementary methods of assessing referral appropriateness were used: expert-opinion-based and objective-indicator based assessments.

The study findings showed that both districts and hospitals exhibited opportunistic behaviours. While the problem of inappropriate referrals from districts dominated, inappropriate hospital behaviours were also reported. Exploring the reasons for these findings was achieved through interviews with selected providers among who were frontline workers. While district frontline providers were included in the study from the inception of the study, those from hospitals were originally not included. Data from

hospital frontline workers was collected after the major data collection had been completed, and thus there was a difference in the timing of the data collection phases.

The design of the study was institution based, and did not as is typical of such studies include data collection from communities. The findings, however, illustrated that social pressures had a bearing on provider behaviour. The study could have been enriched by including focus group discussions to ascertain the influence of community factors on providers' referral behaviour. Although the study adopted an institutional approach, the influence of community level factors could have been achieving by adapting the theoretical framework through including the "external environment", under which non-institutional influences, such as "community level factors" could have been captured. This would have enabled the exploration of how the providers' behaviour was shaped by such factors.

Recommendations

The introduction of referral contracts is premised on the purchaser-provider model, under which roles are delineated among contracting parties. While the health service provision roles of districts and hospitals were defined in the BPC, the study showed that there were overlaps in the range of services provided. In part, the perpetuation of referral difficulties arose from the lack of a reward and penalty system that would have compelled the contracting parties to adhere to the provisions of the BPC policy. That there were no effective sanctions to make the BPC effective was in part a reflection of less active stewardship role on the part of the MOH towards districts and hospitals. In similar manner, there was also limited stewardship on the side of districts and hospitals towards frontline providers.

The study showed that although contracting had been introduced, the referral behaviour of districts and hospitals had not been impacted much. While "soft contracting" is the norm in settings where both districts and hospitals belonged to the public health sector, the MOH ought to have been more involved in ensuring that the districts and hospitals endeavoured to minimise the contracting difficulties.

The need for effective sanctions towards both districts and hospitals was exemplified by the preponderance of social over organisational rewards. An enhanced stewardship by the MOH would have helped in clarifying the ambiguities that providers showed in their relation to communities. The lack of a clearly defined "social function" resulted in the providers adopting behaviours that increased the referral difficulties.

While both districts and hospitals had been accorded some degree of autonomy, and some gains had been achieved, the freedom was limited. In order to improve the effectiveness of contracting, the autonomy ought to be expanded, for instance through letting hospitals and districts have more leeway in dealing with their staff.

The relationship between districts and hospitals was marked by a high degree of mistrust, which was compounded by limited information on either side. The hospital managers argued that district frontline providers made inappropriate referrals, while districts maintained that hospitals that did not provide feedback and offered limited services to referred cases. Both DHBs and RHBs, however, did not have the data to back their arguments. At the time of this study, there was no information system for managing referrals between districts and hospitals and this contributed to the mistrust. Development of such a system would be useful in improving the management of referrals. This could be built into the existing HMIS system, which at the time of collecting data for this study did not capture referral data.

Hospital managers/directors suggested that it would be preferable for the CBOH to directly fund them for referral services. While this could improve the effective allocation of grants to hospitals, it could lead to an increase of referrals from DHBs. Rather, efforts should be directed at measures that limit the extent of inappropriate referrals from district health facilities while simultaneously emphasizing the need for the requisite health care for appropriate referrals at hospitals. This could be achieved through improving the competencies of providers and implementation of provider reorientation programmes in health facilities.

For research areas, the study findings showed that further research in two areas would improve the knowledge base on contracting and referrals. This study concentrated on the difficulties of contracts between DHBs and RHBs. Given the novelty of contracting in the health sector, it would be worthwhile to investigate the problems related to contracting in the broader health sector. A study of upstream contracts would shed more light on the subject.

Through the persistent referrals to hospitals, districts may be passing costs to communities, at a time when poverty levels are high, which may threaten access to health services. Studies assessing the extent to which economic factors affect utilization of hospital services would be valuable. The study showed consistently high levels of inappropriate referrals for the NGO hospital. Further exploration of the causes, levels and patterns of referrals to NGO hospitals would provider answers to the issue. Although not an explicit part of the study objectives, the findings consistently showed referral appropriateness for pneumonia than malaria cases. An investigation into this finding could unveil the factors accounting for this and provide policy makers with alternatives for improving the referral contracts.

List of References

Abramson WB. (2001) Monitoring and evaluation of contracts for health service delivery in Costa Rica, *Health Policy and Planning.* 16(4):404-411

Abrantes A. (1999) Contracting public health services in Latin America. The World Bank: Washington (unpublished report)

Airey T. (1989) The impact of road construction on hospital in-patient catchments in the Meru district of Kenya, *Social Science and Medicine.* 29(1): 95-106

Akin JS. and Hutchinson P. (1999) Health-care facility choice and the phenomenon of bypassing, *Health Policy and Planning* 14(2): 135–151.

Alisjahbana A. Williams C. Hermawan D. Kwast BE. Koblinsky M. (1995) An intergrated village maternity service to improve referral patterns in a rural area in West, Java. *International Journal of Gyneacology and Obstetrics* 48(1000): 83-94

Allen P. (2002) A socio-legal and economic analysis of contracting in the NHS internal market using a case study of contracting for district nursing, *Social Science and Medicine.* 54:255-266

Alper PR. (1994) Primary care in transition, *Journal of the American Medical Association* 272(19): 1523-7

Anand P. (1995) Objectives. information and incentives in the NHS internal market.. *Health Services Management Research* 8(1):47-53

Anthony D. (2003) Changing the nature of physician referral relationships in the US: the impact of managed care, *Social Science and Medicine* 56(10): 2033-2044

Ashton T. (1997). Contracting for health services in New Zealand: a transaction cost analysis, *Social Science and Medicine.* 46(3):367-367

Atkinson S. Ngwengwe A. Macwan'gi M. Ngulube TJ. Harpham T. O'Connell A. (1999) The referral process and urban health care in sub-Saharan Africa: the case of Lusaka. Zambia, *Social Science and Medicine*; 49(1):27-38

Bachman HK and Freeborn KD. (1999) HMO physicians' use of referrals, *Social Science and Medicine.* 48:547-557.

Bacq FL and Reitsema A. (1997) High mortality levels and additional risk from poor accessibility in two districts of Northern Zambia, *International Journal of Epidemiology.* 26(2):357-363

Barnum H. Kutzin J. (1993) Public Hospitals in Developing Countries: Resource Use, Cost and Financing. Johns Hopkins University Press: Baltimore.

Bartlett W. and Le Grand J. (1993) The performance of trusts, in Robinson R and Le Grand J (eds) *Evaluating the NHS reforms* Hermitage: London

Bartlett W. and Le Grand J. (1994) The theory of quasi markets, in Le Grand J. Bartlett W. (eds) *Quasi Markets and Social Policy* Macmillan. London

Batley R. (1997) A research framework for analysing capacity to undertake the 'new roles' of Government. *Role of Government in adjusting economies.* Paper no. 23, International development research department: University of Birmingham.

Beddow AJ. Cohen DR. (2001) Marginal-cost contracting in the NHS: results from a preliminary survey, *Health Services Management Research* 14(2):104-109

Bennet S. and Mills A. (1998) Government capacity to contract: health sector experience and lessons, *Public Administration and Development* 18:307-326

Bennett S. Mills A. Russell S. Supachutikul A. Tangcharoensathien V. (1999) Health sector summary paper, *Role of Government in adjusting economies,* International development research department: University of Birmingham

Bennett S. Russell S. Mills A. (1999) Institutional and economic perspectives on Government capacity to assume new roles in the health sector: A review of experience, Department of Public Health and Policy, Health Policy Unit, London School of Hygiene and Tropical Medicine Department Publication No. 22

Bergman S. (1998) Swedish model of health care reforms: a review and assessment, *International Journal of Health Planning and Management* 13(2):91-106

Blas E. Limbambala ME. (2001)a User-payment. decentralization and health service utilization in Zambia, *Health Policy and Planning* 16(2):19–28.

Blas E. Limbambala ME. (2001)b. The challenge of hospitals in health sector reform: the case of Zambia, *Health Policy and Planning* 16(2): 29–43

Bossert T. Chitah MB. Bowser D. (2003) Decentralization in Zambia: resource allocation and district performance, *Health Policy and Planning* (18)4: 357-369

Bossert T. (1998) Analyzing the decentralization of health systems in developing countries: decision space, innovation and performance, *Social Science and Medicine* 47(10): 1513-1527

Bossyns P and Van Lerberghe W. (2004) The weakest link: competence and prestige as constraints to referral by isolated nurses in rural Niger, *Human Resources for Health* 2(1)

Bowling A. Jacobson B. Southgate L. Formby J. (1991) General practitioners' view on quality specifications for "outpatient referrals and care contracts," *British Medical Journal* 303:292-294

Boyet I and Finlay D. (1995) The quasi-market, the entrepreneur and the effectiveness of the NHS business manager, *Public Administration* 73(3): 393-411

Broomberg J. (1994) Managing the health care market in developing countries: prospects and problems, *Health Policy and Planning.* 9(3):237-251

Butler J. (1993) Origins and early development,. in R Robinson and J Le Grand (eds). *Evaluating the NHS reforms,* Hermitage: London

Cairns J. and Donaldson C. (1993) Introduction to economics in the new NHS, *Health Policy* 25(1-2):1-7

Cairns J. (1993) Contracts problems and prospects, *Health Policy* 25(1-2):127-140

Central Board of Health (CBOH. Zambia) (1997) National Strategic Health Plan, Lusaka.

Central Board of Health (CBOH. Zambia) (1999) Second and third level hospitals health planning guide, Lusaka.

Central Board of Health (CBOH. Zambia) (1999) Financial management information systems, second level Hospitals Lusaka.

Central Board of Health (CBOH. Zambia) (c2000) A Situational analysis of selected referral hospitals in Lusaka. Zambia, [unpublished report]

Central Board of Health (CBOH. Zambia) (2003) Costing second level basic health care in Zambia, IHE/UNZA: Lusaka.

Central Statistical Office (CSO. Zambia) (2002) Zambia Demographic and Health Survey (ZDHS)

Chernichovsky D. (1995) What can developing countries learn from the health systems of developed countries? *Health Policy* 32(1-3):79-91

Clark D. Neal B. Heather P. (1995) Contracting for palliative care *Social Science and Medicine,* 40(9):1193-1202

Coast J. (1999) Citizens. their agents and health care rationing: an exploratory study using qualitative methods, *Health Economics* 10(2):159-174

Coast J. (1999) The appropriate use of qualitative methods in health economics, *Health Economics* 8(4): 345-353

Coulter A. (1998) Managing demand at the interface between primary and secondary care, *British Medical Journal.* 27 June

Coulter A. (1992) in Roland M. Coulter A. (ed): The patient's perspective, *Hospital Referrals* Oxford University Press: Oxford.

Crump BJ. Panton R. Drummond MF. (1995) Transferring the costs of expensive treatments from secondary to primary care, *British Medical Journal.* 310(6978): 509-512

Dawson D and Goddard M. (1999) Long term contracts in the NHS: A solution in search of a problem? *Health Economics.* 8(8):709-720

De Silva S. (2000) Community-based contracting: a review of stakeholder experience, World Bank, Washington

Donaldson C. (1995) Economics. public health and health care purchasing: reinventing the wheel? *Health Policy.* 33(2):79-90

Dawson D and Goddard M. (1999) Long term contracts in the NHS: A solution in search of a problem? *Health Economics.* 8(8):709-720

Earwicker SC. and Whynes DK. (1998) General practitioners referral thresholds and choices of referral destination: an experimental study, *Health Economics.* 7(8):711-722

Ellis RP and McGuire TG. (1995) Hospital response to prospective payment: moral hazard. selection. and practice-style effects, *Journal of Health Economics* 15(3):257-77

England R. (2000) Contracting and performance management in the health sector: some pointers on how to do it, DFID: London

Fawcus S. Mbizvo M. Lindmark G. Nystrom L. (1996) A community-based investigation of avoidable factors for maternal mortality in Zimbabwe, *Studies in Family Planning.* 27(6): 319–327

Fenn PN. Rickman A. and McGuire. (1994) Contracts and supply assurance in the UK health care market, *Journal of Health Economics* 13(2):125-44

Font F. Quinto L. Masanja H. Nathan R. Ascaso AC. Menendez C. Tanner M. Schellenberg JA. Alonso P. (2002) Paediatric referrals in rural Tanzania: the Kilombero district study – a case series, *BMC International Health and Human rights.* 2(4)

Flyn R. Pickard S. Williams G. (1995) Contracts and the quasi market in community health services, *Journal of Social Policy.* 24(4):529-550

Frant H. (1996) High-powered and low-powered incentives in the public sector, *Journal of Public Administration Research and Theory.* 3: 365-381

Freidman BT. Harwood MK. and Shields M. (2002) Barriers and enablers to hospice referrals: an expert overview, *Journal of Palliative Medicine.* 5(1) 73-84

Freund P. (1986) Health care in a declining economy: the case of Zambia, *Social Science and Medicine.* 23(9):875-88.

Gapenski LC and Langland-Orban B. (1996) Impact of capitation contracts on financial risk: a monte carlo simulation, *Health services management research.* 9(3): 183-191

Ghodse B. (1995) Extracontractual referrals: a safety valve or administrative paperchase? *British Medical Journal.* 310(6994):1573-1576

Gilson L. and Mills A. (1995) Health sector reforms in sub-Saharan Africa: lessons of the last ten years, *Health Policy.* 32(1-3):215-243

Gilson L. Adusei J. Arhin D. Hongoro C. Mujinja P. and Sogoe K. (1977) Should African governments contact out services to church providers? In Bennet S. McPake B and Mills A. (Eds) *Private Health Providers in Developing Countries: Servicing the Public Interest?*: Zed Books London

Glendinning C. (1999) GP and contracts: bringing general practice into primary care, *Social Policy and Administration.* 33(2):115-131

Goddard M and Mannion R. (1998) From competition to co-operation: new economic relationships in the national health service, *Health Economics.* 7(2):105-119

Goddard M. Mannion R. Smith P. (2000) Enhancing performance in health care: a theoretical perspective on agency and role of information, *Health Economics.* 9(2):95-107

Goodwin N. Mays N. McLeod H. Malbon G. Raftery J. (1998) Evaluation of total purchasing in England and Scotland and implications for primary care groups in England: personal interviews and analysis of routine data, *British Medical Journal.* 317:256-259

Gosden T and Torgerson DJ. (1997) The effect of fundholding on prescribing and referral costs: a review of the evidence, *Health Policy* 40(2):103-114

Griffiths L and Hughes D. (2000) Talking contracts and taking care: managers and professionals in the British National Health Services internal market, *Social Science and Medicine* 51(2):209-22

Griffiths A. (1995) in Pulin D (ed). Switzerland - The Right Place of Teaching Hospitals, *The Proper Function of Teaching Hospitals within Health Systems.*

Grindle M and Hilderbrand E. (1995) 'Building sustainable capacity in the public sector: what can be done? *Public Administration and Development.* 15(5): 441-463

Gosden T and Torgerson DJ. (1997) The effect of fundholding on prescribing and referral costs: a review of evidence, *Health Policy.* 40(2):103-14

Haddon B. (1998) Strategic review of the KANDO project, Ziken International Consultants Limited: London.

Hardy BI. Mur-Veemanu I. Steenbergen M. Wistow G. (1999) Inter-agency services in England and the Netherlands: a comparative study of integrated care development and delivery, *Health Policy.* 48(2):87-105

Harden I. (1992) The contracting state, Open University Press: Buckinham

Ham C. and Shapiro J. (1995) The future of fundholding, *British Medical Journal.* 310(6988): 1150-1151

Hanson K. Atuyambe L. Kamwanga J. Mcpake B. Mungule O. Sengooba F. (2002) Towards improving hospital performance in Uganda and Zambia: reflections and opportunities for autonomy, *Health Policy.* 61(1):73-94

Hausman D. and Le Grande J. (1999) Incentives and health policy: primary and secondary care in the British national health service, *Social Science and Medicine.* 49:1299-1307

Heinemann AW. Roth EJ. Rychlik K. Pe K. King C. Clumpner J. (2003) The impact of stroke practice guidelines on knowledge and practice patterns of acute care health professionals, *Journal of Evaluation in Clinical Practice.* 9(2): 203-212

Horn DH. and Horn RA. (1986) Reliability and Validity of the Severity of Illness Index, *Medical Care* 24(2):159-78

Horn SD. Bulkley G. Sharkey PD. Chambers AF. Horn RA. Schramm CJ. (1985) Interhospital differences in the severity of illness, *The New England Journal of Medicines.* 313(1):20-4

Howden-Chapman P and Ashton T. (1994) Shopping for health: purchasing health services through contracts, *Health Policy.* 29: 61-83

Husain M. (1995) in Pulin D. (ed) The University Hospitals in Pakistan – The case of the AGA Khan University Hospital, *The Proper Function of Teaching Hospitals within Health Systems.*

International Monetary Fund (IMF). (2000) Decision making point for the enhanced heavily indebted country (HIPC) initiative, Zambia.

Jack W. (2002) Contracting for health services: an evaluation of recent reforms in Nicaragua, Georgetown University

Jeppson A. Ostergree P. and Hagstrom B. (2003) Restructuring a ministry of health - an analysis of structure and process: a case study from Uganda, *Health policy and planning* 18(1):68-73

Jones R. (1992) in Roland M and Coulter A. (ed). Decision-making and hospital referrals. *Hospital Referrals,* Oxford University Press: Oxford.

Kalumba K. (1997) Towards an equity-oriented policy of decentralisation on health systems under conditions of turbulence: the case of Zambia, Report number WHO/ARA/97.2, World Health Organisation: Geneva.

Kamwanga J. McPake B. Hanson K. Mungule O. (2002) in Sheshamani V. Mwikisa CN. Knut O. (eds) Autonomous hospitals in Zambia and the equity implications of the market for hospital services: A description of the current state of hospital autonomy policy, *Selected studies on health reforms in Zambia. Department of Economics.* University of Zambia/Institute of Health Economics: Lund.

Keen J and Packwoood T. (1999) Using case studies in health services research and policy research, in Pope C and Mays M (eds) *Qualitative Research in Health Care.* BMJ books: London.

Kirkman BL. Huijsman R. Van der Grinten T. Brink G. (1997) Hospital adaptation to risk-bearing: managerial implications of changes in purchaser-provider contracting, *Health Policy.* 39(3):207-223

Kloos H. (1990) Utilization of selected hospitals. health centres and health stations in Central. Southern and Western Ethiopia, *Social Science and Medicine*: 31: 101–114.

Koblinsky MA. Campbell O. and Heichelheim J. (1999) Organizing delivery care: what works for safe motherhood? *Bulletin of the World Health Organisation* 77(5): 399–406.

Kutzin J (1995) Experience with organizational and financing reform of the health sector, SHS Paper No. 8 WHO, Geneva

Lambrechts T. Bryce J. and Orinda V. (1999) Integrated management of childhood illness: a summary of first experiences, *Bulletin of the World Health Organization.* 77:582 594

Larbi GA. (1998) *The new public management and approach and crisis states,* United Nations Research Institute for Social Development (UNRISD): Geneva.

Lerberghe WV. and Lafort Y. (1990) The role of hospitals in the district. delivering or supporting health care? WHO/Strengthening of Health Services: Geneva

Le Bacq F and Rietsema A.(1997) High maternal mortality levels and additional risk from poor accessibility in two districts of Northern Province Zambia, *International Journal of Epidemiology* 26(2):357 363

Le Grande J. Mays N. and Nixon J. (1998) The reforms – success or failure? In LeGrand. N. Mays and Mulligan J. (eds) *Learning from the NHS Internal Market: a Review of the Evidence,* London: The Kings Fund

Le Grand. J (1993) Evaluating the NHS. in Robinson R and Le Grand J (eds) *Evaluating the NHS reforms,* Hermitage: London

Leonard KL. (2003) African traditional healers and outcome-contingent contracts in health care, *Journal of Development Economics.* 72(1):1-22

Lember M . (2000) A policy of introducing a new contract and funding system of general practice in Estonia, *International Journal of Health Planning and Management.* 17(1):41-53

Levin J. (2002) Relational incentive contracts, *The American Economic Review.* C73. D82

Lien I. (2003) Financial and organisational reforms in the health sector: implications for the financing and management of mental health care services, *Health Policy.* 63(1):73-80

Light DW. (2000) Managed competition. governmentality and institutional response in the United Kingdom, *Social Science and Medicine.* 52(8):1167-81

Liu X. and Mills A. (1999) Evaluating payment mechanisms: how do we measure unnecessary care? *Health Policy and Planning.* 14(4):409-413

Livesey H. (1998) Fund-holding and contracting for community nursing services: a selected review of the literature, *Journal of Advanced Nursing* 28(3):483-490

Long WJ. and Kirsch D. (1998) A government purchaser perspective: TennCare-strengthening the safety net, *Cancer* 15(82): 2000-2

Low A. de Coeyere D. Shivute N. Brandt LJ. (2001) Patient referral patterns in Namibia: Identification of potential to improve the efficiency of the health care system, *International Journal of Health Planning and Management* 16(3): 243–257

Lu M. and Yuan L. (2003) Risk selection and matching in performance-based contracting, *Health Economics* 12(5):339-54

Macintyre K. Hotchkiss DR. (1999) Referral revisited: community financing schemes and emergency transport in rural Africa, *Social Science and Medicine* 49(11): 1473–1487

Macintyre K. Lochigan M. and Letipila F. (2003) Understanding referral from primary care clinics in rural Kenya: using health information systems to prioritise health services, *International Journal of Health Planning and Management* 18(1):23-39

Malcom L. and Barnett P. (1994) New Zealand's health providers in an emerging market, *Health Policy.* 29(1-2):85-100

Martey JO. Djan JO. Twum S. Browne ENL. Opoku SA. (1998) Referrals for obstetrical complications from Ejisu district, Ghana, *West African Journal of Medicine.* 17(2):58- 63

Manson A. Morgan K. (1995) Purchaser-Provider: the international dimension, *British Medical Journal.* 310 (6974): 231-235

Mason A. (1995) Purchaser-provider: the international dimension, *British Medical Journal* 310(6974):231-235

McCoy D. Buch E. and Palmer N. (2000) Protecting efficient. comprehensive and integrated primary health care: principals and guidelines for inter-governmental contracting/service agreements, Health Systems Trust: London.

McGuire MM. and Porell FQ. (1984) Spatial patterns of hospital utilization: the impact of distance and time, *Inquiry* 21(1): 84–95.

Mcneil I. (1978) Contracts: adjustment of long-term economic relations under classical. neo-classical and relational law, *Northwestern University Law Review,* 72: 854-905

McPake B. Kumaranayake L. and Normand C. (2002) Health economics: an international perspective, London: Routledge

McPake B and Banda EE. (1994) Contracting out of health services in developing countries, *Health Policy and Planning* 9(1):25-30

Mills A. (1990) The economics of hospitals in developing countries Part I: expenditure patterns, *Health Policy and Planning* 5(2): 107-117

Mills A. (1990) The economics of hospitals in developing countries, Part II: costs and sources of income, *Health Policy and Planning.* 5(3): 203-218

Mills A. (1995) Improving the efficiency of public sector health services in developing countries: bureaucratic versus market approaches, Department of Public Health and Policy, Health Policy Unit, London School of Hygiene and Tropical Medicine. Monograph.

Mills A. (1998) To contract or not to contract? Issues for low and middle income countries, *Health Policy and Planning.* 13(1): 32-40

Mills A. Antonius R. Daniels J. Grays H. Haqq E and Rutten F. (2002) The distribution of health planning and management responsibilities between centre and periphery: historical patterns and reform trends in four Carribean territories, *Health Policy.* 62(1):65-84

Mills S. and Broomberg J. (1998) *Experiences of contracting: an overview of literature,* Macroeconomics, Health and Development series. 33. World Health Organisation: Geneva

Mills A. Bennett S. and Russell S. (2001) The challenge of health sector reform, what must governments do? Palgrave: New York

Ministry of Finance and National Development (MFNP, Zambia) (1995) Budget Speech. Government Printing Company: Lusaka

Ministry of Health (MOH, Zambia) (1995) National health services act 1995, Government Printing Company: Lusaka.

Ministry of Health (MOH, Zambia) (1995) Guidelines for the interpretation and application of the National health services act no. 22 of 1995, Government Printing Company: Lusaka

Ministry of Health (MOH, Zambia) (1992) National Health Policies and Strategies (Health Reforms), Government Printing Company: Lusaka

Ministry of Health (MOH, Zambia) (1998) Guidelines on working relations between Ministry of health and autonomous health boards, Government Printing Company: Lusaka

Ministry of Health (MOH, Zambia). (1998) National health care financing policy, Government Printing Company: Lusaka

Ministry of Health (MOH) (2000) Hospital Policy, Government Printing Company: Lusaka

Mitchell J. (1983) Case and situation analysis, *Sociological Review*; 31(2)

Murray CJL. (1995) Towards an analytical approach to health sector reform, *Health Policy* 32(1-3):93-109

Murray SF. Davies S. Phiri R. Ahmed Y. (2001) Tools for assessing the effectiveness of district maternity referral systems, *Health Policy and Planning* 16(4):353-361

Mwabu GM. (1989) Referral systems and health care seeking behaviour of patients: an economic analysis, *World Development* 17: 85–92

Mwabu GM. (1995) Health care reform in Kenya: a review of the process, *Health Policy.* 32:245-255

Newbrander W. Barnum H. and Kutzin J. (1992) Hospital Economics and Financing in Developing Countries, World Health Organization: Geneva.

Newton J. Eccles M. and Hutchinson A. (1992) Communication between general practitioners and consultants: what should their letters contain? *British Medical Journal.* 304:821-824

Nkyekyer K. (2000) Peripartum referrals to Korle Bu teaching hospital. Ghana – a descriptive study, *Tropical Medicine and International Health.* 5(11):811-817

Nordberg E. Holmberg S. and Kiugu S. (1996) Exploring the interface between first and second level of care: referrals in rural Africa, *Tropical Medicine and International Health.*1(1): 107–111

Nunberg B. (1995), *Managing the civil service: reform lessons from advanced industrialised countries,* World Bank Discussion Papers No. 25

Ohara K. Melendez V. Uehara N. Ohi G. (1998) Study of a patient referral systems in the Republic of Honduras, *Health Policy and Planning* 13(4):433-445

Palmer N. (2000) The use of private-sector contracts for primary health care: theory, evidence and lessons for low-income and middle-income countries, *Bulletin of the World Health Organisation* 78(6): 821-844

Palmer N. and Mills A. (2000) Serious contractual difficulties? A case study of contracting of PHC in South Africa, Health Systems Financing in Low-income African and Asian Countries, CERDI

Palmer N. (2001) Influences on the nature and performance of contracts for primary health care: case studies from Southern Africa, unpublished Ph.D. thesis, University of London: London,

Palmer N. and Mills A. (2003) Classical versus relational approaches to understanding controls on a contract with independent GPs in South Africa, *Health Economics.* 12(12):1005-1020

Preker SP. Harding A. and Travis P. (2000) Make or buy decisions in the production of health care goods and services: new insights from institutional economics and organizational theory, *Bulletin of the World Health Organization* 78(6):779-790

Preker AS and Harding A. (2000) The economics of public and private roles in health care: insights from institutional economics and organisation theory, *Health. Nutrition and Population,* World Bank: Washington

Propper C. (1995) Agency and incentives in the NHS internal market, *Social Science and Medicine* 40(12):1683-1690

Propper C. (1995) Regulatory reform of the NHS internal market, *Health Economics.* 4(2): 77-83

Powell M. (1995) Quasi market in British health policy: a longue duree perspective, *Social Policy and Administration.* 37(7):725-741

Power M. Zwarenstein R. Lewin M. Vundule S. Mostert CJ. (1997) Most patients attending a 'walk-in' clinic at Red Cross Memorial children's hospital could be safely managed at primary care level, *South African Medical Journal.* J 87: 36–41

Pust RE. (1985) Analysing referral patterns to rural provincial hospitals, *Tropical Doctor.* 15: 95–97.

Rajeswari R. Chandrasekaran V. Suhadev M. Sivasubramaniam S. Sudha G. Renu G. (2002) Factors associated with patient and health system delays in diagnosis of tuberculosis in South India, *The International Journal of Tuberculosis and Lung Disease.* 6(9) 789-795

Roberts JA. (1993) Managing markets, *Journal of Public Health Medicine,* 1993; 15 (4): 305-310

Roland M and Morris R. (1988) Are referrals by general practitioners influenced by the availability of consultants? *British Medical Journal* 297:599-600

Russell S. and Attanayake. (1997) Sri Lanka- Reforming the Health Sector: Does Government have the Capacity, *The Role of Government in adjusting economies.* International development research department: University of Birmingham

Russell S. Kwaramba P. Hongoro C. Sifiso C. (1997) Zimbabwe: reforming the health sector- does Government have the capacity? *The Role of Government in adjusting economies,* International development research department: University of Birmingham

Samai O and Sengeh P. (1997) Facilitating emergency obstetric care through transportation and communication, Bo. Sierra Leone, *International Journal of Gynecology and Obstetrics* 59(Supp 2):157-164

Sanders D. Kravitz J. Lewin S. McKee M. (1998) Zimbabwe's referral system: does it work? *Health Policy and Planning.* 13(4): 359-370

Scott A and Hall J. (1995) Evaluating the effects of GP remuneration: problems and prospects, *Health Policy* 31(3):183-95

Seale C. (1999) The quality of qualitative research, USA: Sage

Segall M. (2003) District health systems in a neoliberal world: a review of five key policy areas, *International Journal of Health Planning and Management.* 18(Suppl 1):S5-S26

Segouin C and Thayer C. (1999) The French prescription for health care reform, *International Journal of Health Planning and Management* 14(4):313-327

Shackley P and Healy A. (1993) Creating a market: an economic analysis of the purchaser-provider model, *Health Policy,* 25:153-168

Sheaff R. (1999) The development of English primary care group governance: a scenario analysis, *International Journal of Health Planning and Management,* 14(4):257-68

Shehu D. Ikeh AT. and Kuna MJ. (1997) Mobilizing transport for obstetric emergencies in northwestern Nigeria, *International Journal of Gynecology and Obstetrics.* 59(suppl 2):173-180

Siddiqi S. Kielmann AA. Khan MS. Ali N. Ghaffar A. Sheikh U. Mumtaz Z. (2001) The effectiveness of patient referral in Pakistan, *Health Policy and Planning.* 16(2):193-198

Slack K and Savedoff WD. (2001) Public purchaser-private provider contracting for health services: examples from Latin America and the Caribbean. Sustainable Development Department, Technical paper series: Washington.

Smith PC. Stephan A. Valdmanis V. Verheyen P. (1997) Principal-agent in health care systems: an international perspective, *Health Policy* 41(9): 37-60

Smithson P. Asamoa-Baah. and Mills A. (1997) The Case of the Health Sector in Ghana, *The Role of Government in adjusting economies,* International development research department: University of Birmingham

Soderlund N. Csaba I. Gray A. Milne R. Raftery J. (1997) Impact of NHS reforms on English hospital productivity: an analysis of the first three years, *British Medical Journal* 315:1126-1129

Soeter R. (1997) Rapid assessment of health reforms in Africa: the case of Zambia, EPOS Health Consultants: Germany

Soeter R. and Griffiths F. (2003) Improving government health services through contract management: a case from Cambodia, *Health Policy and Planning* 18(1):74-83

Somerset M. Faulkner A. Shaw A. Dunn L. Sharp JD. (1999) Obstacles of the path to a primary-care led National Health Service: complexities of outpatient care, *Social Science and Medicine.* 48:213-225

Spurgeon P. (1994) Purchaser-provider relationships: current practice and future prospects, *Health Services Management Research* 7(3):195-200

Strauss A. (1987) Qualitative analysis for social scientists, University Press: Cambridge

Strauss A. and Corbin J. (1990) Basics of qualitative: grounded theory procedures and techniques, Sage: London

Strong N. and Waterson M. (1987) in Clarke R and McGuiness T (eds) Principals, Agents and Information *The economics of the firm* Basil Blackwell: London

Struyk R. (2002) Non-profit organisations as contracted local social services providers in Eastern Europe and the Commonwealth of independent states, *Public Administration and Development.* 22:429-437

Szilagyi PG. Humiston SG. Pollard SL. Kolasa MS. Rodewald LE. (2000) Decline in physician referrals to health departments clinics for immunisations – the role of vaccine financing, *American Journal of Preventive Medicine* 18(4): 318-324

Thaddeus S. and Maine D. (1994) Too far to walk: maternal mortality in context, *Social Science and Medicine* 38(8): 1091–1110

Thomas KJ. Nicholl JP. and Fall M. (2001) Access to complementary medicine via general practice, *British Journal of General Practice,* 51(462): 25-30

Urassa E. Massawe S. Lindmark G. Nyström L. (1997) Operational factors affecting maternal mortality in Tanzania, *Health Policy and Planning* 12(1):50-57

Van Bergen JE. (1995) District health care between quality assurance and crisis management: possibilities within the limits, Mporokoso and Kaputa Districts, Zambia, *Tropical Geographical Medicine* 47(1): 23–29

Van Lerberghe W. (1987) Expert Committee on the Role of Hospitals at the First Referral Level. Hospitals and Health for All. WHO: Geneva.

Van Lerberghe W and Pangu K. (1988) Comprehensive can be effective: the influence of coverage with a health centre network on the hospitalisation patterns in the rural area of Kasongo Zaire *Social Science and Medicine,* 26(9) 949-955

Van Lerberghe W. de Béthune X. De Brouwere V. (1997) Hospitals in sub-Saharan Africa: why we need more of what does not work as it should, *Tropical Medicine and International Health.* 2(8):799 808

Walsh D. (1995) The internal market in health - sham or saviour, *British Journal of Health Care Management* (1)7:352-355

Walsh K. Davis H. (1993) Competition and service: the impact of the local government act (1988), HMSO: London

Walsh K. Deakin N. Smith P. Spurgeon P. Thomas N. (1997) Contracting for Change: Contracts in Health, Social Care, and other Local Government Services. Oxford University Press: Oxford

Werna E. (1996) The Health Sector in Venezuela, *The Role of Government in Adjusting Economies,* University of Birmingham: Birmingham.

Williams G. Flynn R. and Pickard S. (1997) Paradoxes of GP fundholding: contracting for community health services in British National Health Service, *Social Science and Medicine* 45(11): 1669-1678

Wangenheim F. and Bayon T. (2004) Satisfaction. loyalty and word of mouth within the customer base of a utility provider: Differences between stayers. switchers and referral switchers, *Journal of Consumer Behaviour.* 3(3): 211-220(10)

Wilkin D. (1992) Patterns of referral: explaining variation, In Roland M. and Coulter A. (ed): *Hospital Referrals.* Oxford University Press: Oxford.

Williamson OE. (1995) The institutions and Governance of economic development and reform, *Proceedings of the World Bank annual conference on development economics 1994.*

Williamson OE. (1985) The economic institutions of capitalism, The free press: New York

Williamson OE. (1975) Markets and Hierarchies – Analysis and antitrust implications. The free press: New York

World Bank. (1993) Investing in health, World Development Report: Washington

World Bank. (1994) Zambia Poverty Assessment, World Bank Report: Washington.

World Bank. (1994) Staff appraisal report: Zambia Health sector support project, Human Resources Division, Africa Regional Office: Washington

World Health Organisation (WHO) (2000) Word Health Report, 2000, Health Systems: Improving Performance, WHO: Geneva

World Health Organisation (WHO). (1998) The World Health Report, A Report of the Director General, Life in the 21st Century: A vision for all, WHO: Geneva.

World Health Organisation (WHO). (1998) Health for All in the 21st Century, WHO: Geneva

World Health Organisation (WHO)/United Nations Children's Fund (UNICEF) (1978) Primary Health Care, WHO: Geneva

Yin R. (1994), Case-study research: design and methods, Applied social research methods series, Volume 5. Sage: USA

List of appendices

Appendix 1: Interview guide for Central board of health and ministry of health

Transaction attributes

What freedoms do hospitals have regarding the districts that they could contract with and how has this affected them?
Who employs the various categories of staff in districts and hospitals? What influence do the various employers exert on staff and how does this affect districts and hospitals?
What opportunities and difficulties does this present for you? What have you done to reduce these difficulties?
How do the scarcities of staff affect districts and hospitals *(probe for problems related to scarcities of skilled staff and managers)*
What type of changes have hospitals made to OPDs and how has this affected the relationship between districts and hospitals

Type of contract

How did districts and hospitals manage referrals before the health reforms and how has this changed after the reforms?
What changes has contracting introduced? How have districts and hospitals responded to these changes? Are these responses desirable? How have the changes impacted on referrals?
What have been the main concerns in the process of developing contracts? How did these concerns arise and how have they been addressed?
To what extent have referral problems figured?
How do contracts/ contract negotiating process impact on referral patterns?
(emphasising hospital-district contracts) Could they play a greater role?
(If yes) what are the obstacles to developing stronger mechanisms to influence referral patterns in contracts?
What constraints do the contracts place on inputs? How does this affect the levels and patterns of referrals?

Referral process

How is the referral system supposed to work?
Who, at the district and hospital levels are the key actors in the referral process and what are their responsibilities? What do they actually do?
Why do those with responsibilities act the way they do *(both conformists and non-conformists)*
What has been done to ensure that the key actors' actions are in accord with the expected behaviors?
What strategies have been tried to improve the levels and patterns of referrals between districts and hospitals?
How effective have the strategies been? *(contrast community, district and hospital focused measures)*

Information system

What has been the trend in referrals between districts and hospitals? What explains the changes? How are you able to tell?
To what extent does your information system capture data on referrals between districts and hospitals?

Are you able to determine the appropriateness of referrals? How/why not?
How is such information used to regulate levels and patterns of referrals?

How complete is the information supplied by districts and hospitals? How do you check for validity of the data?

Incentive structure

Why do the actors in the referral system act they way they do? *(referring to the actors identified above)*

Are their actions aligned with district and hospital objectives? If not, what has been done to align their actions with district and hospital objectives?

What is the range of freedoms enjoyed by districts and hospitals and how do these impact on referrals? How can the expansion/ reduction of freedoms affect referrals?

How have districts, hospital and communities responded to referral rationalization measures and how has this affected referrals?

Reward and penalties

What rewards and penalties have been implemented to influence districts and hospitals regarding referrals?

How effective have these rewards and penalties been in achieving desired behaviours and deterring perverse actions?

What other important changes on rewards and penalties have been introduced since the health reforms?

How have these changes affected referrals between districts and hospitals?

Appendix 2: Interview guide for District health boards

Transaction attributes

Does the district have a choice about the hospitals it can contract with? *(If there is no choice)* what difficulties does this present?

Who employs the various staff in the districts? How do the actions of the employers affect your district?

How do the scarcities of staff affect you *(probe for problems related to scarcities of skilled staff and managers)*

Does the district have a hospital? Why does/doesn't the district have a district hospitals? *(If it has a district hospital)* what changes has it made in the hospital OPD? How has this affected referral patterns?

Contracts

How did your district manage referrals before the health reforms and how has this changed after the reforms?

What changes has contracting introduced? How has the district responded to these changes? How have these changes impacted on referrals?

What is your organisation's role in developing contracts between CBoH/MoH and districts and between hospitals and districts?

What have been the main concerns in the process of developing contracts? How did these concerns arise and how have they been addressed?

To what extent have referral problems figured?

How do contracts/ contract negotiating process impact on referral patterns? *(emphasising hospital-district contracts)* Could they play a greater role?

(If yes) what are the obstacles to developing stronger mechanisms to influence referral patterns in contracts?

What constraints do the contracts place on the use of inputs? How does this affect the levels and patterns of referrals?

Referral system

How is the referral process supposed to work?

Who at the HC level are the key actors in the referral process and what are their responsibilities?

What do they actually do?

Why do those with responsibilities act the way they do (both conformists and non-conformists)?

How do the actions of these people impact on referral patterns?

What are the problems with the referral system?

Why do these problems occur? (Probe separately the role played by patients, HC and hospital staff)

What strategies have been used to resolve the problems?

How have these affected the situation?

Does your organisation have a role to play to resolve the problem? What can it do? Does this happen? If it does not, what is the reason?

Are there other organisations that have a role to play in resolving the problem? What can they do? Does this happen? If they do not, what is the reason?

Incentive structure

Why do the identified actors in the referral system act they way they do? *(referring to actors identified above)*

Are the actors' actions in accord with district objectives? If not, what has been done to align their actions with your objectives?

How have you, hospitals and communities responded to referral rationalization measures and how has this affected referrals?

Information system

What has been the trend in referrals between districts and hospitals? What explains these changes? How are you able to tell?

To what extent does your information system capture data on referrals between districts and hospitals? How is such information used to regulate patterns and levels of referrals?

How comprehensive is your information system? How do you check for validity of the data?

Are you able to ascertain appropriateness of referrals made by your staff? Do you have a system for finding out the outcome of patients referred to hospitals? How does it work?

Reward and penalties

What rewards and penalties have been implemented to influence districts and hospitals regarding referrals?

How effective have these rewards and penalties been in achieving desired behaviours and deterring perverse actions?

What other important changes on rewards and penalties have been introduced since the health reforms? What has been the effect?

Appendix 3: Interview guide for Referral hospitals

Transaction attributes

Does your hospital have a choice about the districts they contract with? *(If no choice)* what difficulties does this present?

Who employs the various staff in the hospital? How do the actions of these employers affect your operations?

How do the scarcities of staff affect districts and hospitals *(probe for problems related to scarcities of skilled staff and managers)*

What type of changes have hospitals made to the Outpatient Department (OPD)? How has this affected referral patterns?

Contracts

How did your hospital manage referrals with districts before the health reforms and how has this changed after the reforms?

What changes has contracting introduced? How have districts and hospitals responded to these changes? How have the changes impacted on referrals?

What is your district's role in developing contracts between CBoH/MoH and districts and between hospitals and districts?

What have been the main concerns in the process of developing contracts? How did these concerns arise and how have they been addressed?

To what extent have referral problems figured?

How do contracts/ contract negotiating process impact on referral patterns? *(emphasising hospital-district contracts)*? Could they play a greater role?

(If yes) what are the obstacles to developing stronger mechanisms to influence referral patterns in contracts?

What constraints do the contracts place on inputs? How does this affect the levels and patterns of referrals?

Referral system

How is the referral process supposed to work?

Who, at the HC and hospital levels are the key actors in the referral process and what are their responsibilities? What do they actually do?

Why do those with responsibilities act the way they do (both conformists and non-conformists)?

How do the actions of these people impact on referrals?

What are the problems with the referral system?

Why do they occur? (Probe separately the role played by patients; HC staff; hospital staff)

What strategies have been used to resolve the problems?

How have these affected the situation?

Does your organisation have a role to play to resolve the problem? What can it do? Does this happen? If it does not, what is the reason?

Are there other organisations that have a role to play in resolving the problem? What can they do? Does this happen? If they do not, what is the reason?

Incentive structure

Why do the identified actors in the referral systems act they way they do? *(referring to actors identified above)*

Are these actions aligned with district and hospital objectives? If not, what has been done to align them?
How has your hospitals, districts and communities responded to referral rationalization measures and how has this affected referrals?

Information system

What has been the trend in referrals between the district and hospitals? What explains these trends? How are you able to tell?
To what extent does your information system capture data on referrals between districts and hospitals? How is such information used to regulate patterns and level of referrals?
How comprehensive is the information system? How do you check for validity of the data?
Are you able to ascertain appropriateness of referrals made by districts? Do you have a system for finding out the outcome of patients referred to your hospital? How does it work?

Reward and penalties

What rewards and penalties have been implemented to influence districts and hospitals regarding referrals?
How effective have these rewards and penalties been in achieving desired behaviours and deterring perverse actions?
What other important changes on rewards and penalties have been introduced since the health reforms? What has been the effect?

Appendix 4: Interview guide for Health centre staff involved in referring process

---

Background
What is your education background?
What is your professional qualification? Have you attended any skills upgrading seminars since attaining your professional qualification? *(If yes)* what type and when did you attend this?
What is your current job in this institution? How many years have you been here?
Have you had to change jobs within the institution? *(If yes)* indicate when and why you changed jobs?
What was your previous job before joining this institution? Why did you leave your previous job? Are you happy here?

Motivation
What are your work-related goals/Where do you see yourself years from now in professional terms? *(Probe: career within institution; work outside/private business; potential alternative current and future job opportunities in other organisations including Non Governmental Organisations and International Organisations)*
Are there any examples of others who have achieved goals of the kind described?
What strategies did they use to achieve those goals that were successful?
Are these same strategies open to you? Have your tried to use these strategies before? What has been the outcome?
Are there other strategies that could be successful to achieve the same goals?
What are the work-related scenarios that you hope most to avoid/What work-related situation do you hope most to avoid, which if it happened would jeopardise your career progress? *(Probe: job loss, transfer, demotion, stuck in dead end..)*
Are there any examples of others who those things have happened to?
What did they do that brought that about?
Could that happen to you? What strategies are available to you to avoid that?

Role in referral process
How is the referral process supposed to work?
What is your role in the referral process? What do you actually do?
Is what you do in accord with expectations of your managers? (If not) what are the differences?
What are the problems with the referral system?
Why do these problems occur? (Probe separately the role played by patients; HC staff; hospital staff)
Are there differences in the referral practices of nurses and clinical officers? What are differences and why do they arise?
(Referring to seminars above) How have the seminars mentioned above affected the way you make referrals?
How do you decide when a patient presenting with malaria should be referred? Are there case where you use other ?
How do you decide when a child present with a respiratory track infection should be referred? Are there case where you use other ?

Ideas on improving referrals
What strategies have been used to resolve the problems?
How have these strategies affected the situation?

Does your district have a role to play to resolve the problem? What can it do? Does this happen? *(If no)* why does it not happen?
What role are you, hospitals, districts and communities playing to improve referral patterns?
What else can these groups/you do to improve referral patterns?

<u>Relationship between hospital and district staff</u>
What is your view about the perception among staff in hospitals that people at health centres make unnecessary referrals?
Is there a forum where staff from health centres and hospitals meet? *(Ask the purpose and progress of such meetings and why if none, such meetings are not held)*
How would you describe the relationship between health centre and hospital staff? (*Where there are differences, find out if there have been attempts to minimise these and what the outcome has been)*

Appendix 5: Template for collection of data from inpatient records

(data obtained from hospital patient records (Included all cases: with, without referral letters, and by-passers)

Referring health centre/hospital:

1. Referring health centre/hospital and distance:.....
2. Date.....:.....
3. Card number and location:.....
4. Age:.....
5. Sex: [ ] M [ ] F
6. Place of residence and distance:..... .....
7. Referral status: [ ] Referred [ ] Paid by-pass fee
   [ ] Prepayment scheme member
   (Other).....
8. Prior visits to other providers:.....
   (Indicate what was done)
9. Provisional diagnosis:.....
10. Reason for referring:.....

Receiving hospital:

11. Hospital referred to: [ ]UTH [ ]Kitwe [ ]Ndola
12 Date:
13. Admitted: [ ] Y [ ] N
14. Diagnostic tests done and results
    Tests Temperature HP Hb RR/PR
    Results .....
15. Final diagnosis (indicate reason for discordance where this is the case)
16. General condition (GC).....
17. Comments on the intensity of management and diagnostic skills required for admitted patients (specify requirement and what was done)
18. Admitted patient's details
    Response.....Length of stay.....Dead/alive.....
19. Was referral appropriate?
    (indicate the reason why referral was not appropriate using severity indicators, diagnostic and management skills required for the case)
20. Was admission appropriate:
    (indicate the reason based on expert opinion and diagnostic and management skill requirements)Calculation of

Severity indices (based on temperature):
I. Admission
Derive from temperature on admission
II. Treatment criteria: temperature returns to normal within (pneumonia)
1. Within 24 hrs
2. 25- 72 hrs
3. 72+ hrs
II. Treatment criteria: temperature returns to normal within (malaria)
1. Within 24 hrs
2. 24-48 hrs
3. 48-72
4. 72+

Appendix 6: Template for collection of data from hospital OPD registers

Disease/Condition	DHB-referred	Self-referred
Malaria Diarrhoea RTI/Pneumonia STI/ARC Tuberculosis Anaemia Heart conditions Other diseases/conditions		
Total		

Appendix 7: Format of contracts between DHBs and RHBs

Contract for delivering hospital health services
between the Hospital Management Board of
(name) Central Hospital Board
and the District Board of (name)

---

1. Preamble

The present contract is offered to the Hospital Management Board, hereafter called the HMB, by the district Health Board of.....hereafter called the DHB. The purpose of the contract is for the HMB to deliver quality and cost-effective hospital services to the population in the catchment area.

The contracts is for the purchase of 1st level health services as designated in the formats. The services purchased will be available in their totality. The contract covers the period from 1st of January to 31st of December (year).

By accepting the contract, the HMB agrees to maintain transparent financial record relating to the 1st level health services purchased.

In addition to funding, the HMB shall provide technical support and backstopping for the implementation of the district annual plan.

2. The Parties

The HMB represented by the Executive Director
Date: Name: Signature:
The District health board represented by the District Director of Health
Date: Name: Signature:

3. Transfer of funds:

Funds shall be transferred to the HMB bank account on a monthly basis or as the parties shall agree to

3.1 Bank accounts held by the HMB

Below is the bank account for transfer of funds by the DHB to the HMB
Main account to which the grant should be transferred

Name of bank account	
Bank account number	
Name of bank	
Branch	
Purpose of account	

4. Obligations of the District Health Board

4.1 The District Health Board shall, in a timely fashion, disburse the funds to the HMB as follows:

1. Funds will be disbursed monthly to the designated bank account as listed above.

---

2. In cases where services for 1 'level are wholly provided by the 2nd or 3rd level facility from the whom the district shall purchase services in accordance with the per capita approach, the budget from the EDMS shall be similarly allocated. Negations shall be entered into with the DHB in order to determine the appropriate share of the decentralised drug budget to be allocated to the HMB.

4.2 Availability of essential supplies
The Central Board of Health will ensure the availability of essential drugs and supplies through the EDMSS

4.3 Guidelines and standards
The Central Board of Health will provide guidelines and standards for cost effective provision of hospital services.

4.4 Technical assistance and back-stopping
The CBOH will provide on site guidance, advise and technical back-stopping, primarily through its regional directorates, which will avail it health and management expertise for up to five man-days per three months for any subject related to implementing this contract.

5. Obligations of the Hospital Management Board

5.1 Clinical and diagnostics services
The HMB will provide equity of access to quality health care service at the hospital as specified below. In providing these services, the HMB will choose the most cost-effective interventions, routines and procedures, while at the same time ensuring affordability, professionalism an ethical acceptability.

Catchment population	No of available beds	No of beds purchased

Tick	Service	Comments
	Outpatient General surgical/obstetrics (ceasarean section & minor operations) Paediatrics Dentistry Training and support, for health centres General surgery, more complicated cases (eg heard, chest, elective, traumatology, urology) General medicine (all complicated infections, heart, kidney, endocrine) Gynaecology/obstetrics Psychiatry Intensive care Training for first level hospitals	

5.1 Support to lower level hospital
This contract agreement notwithstanding, the HMB will support functioning of the referral system, ie that first contact point for hospital care (expect for emergencies like road traffic accidents, etc) is the level 1 hospital and only if this hospital is incapable of providing the required diagnosis, treatment and care, is the patient referred to the nearest level II hospital which can provide the required service. Cases which cannot be treated at the II hospital will be referred to a level III or another level II hospital with the required facilities and competencies.

In addition to functioning as the second/tertiary referral level, the HMB will provide technical back-up for the first/second level hospital, eg in relation to clinical expertise, training, etc.

Note:
Level II and III hospitals should normally not provide general outpatient and other primary health care services. If, however, the hospital is providing these services (ref. 5.1 above), the hospital will keep separate accounts and staff for OPD/Primary care.

6. Arbitration:
Any disputes concerning this contract will be resolved amicably. Should this fail, arbitration will be sought from an impartial third party.

Appendix 8: Basic package of care by disease/ health condition and level of health service provision

Disease/condition	Level of health care service provision				
	Community/Health Post	Health Centre	1st level district hospital	2nd level general hospital	3 rd level central hospital
Assumptions: 90% of all malaria treated at home, 10 % in health institutions					
Malaria	IEC and prevention (advocacy and community mobilisation)/ Case management: chloroquine	Case management: lab diagnosis: treatment with fansidar	Management of complications: microscopical diagnosis: treatment with 3rd line drugs: refer high dependence needs.	Respiratory and renal support	Nil
Assumptions: 50% treated by CHW, 10 % at HP, 9% at Health centre and 1% referred on					
Acute Respiratory Infections	Case management at home with support from CHW/ case management of mild ARI.	Case management of moderate ARI: severe ARI manage and refer.	Case management of complications (severe ARI, x-ray, lab tests).	ICU care and case management of chronic lung conditions	Nil

Appendix 8 continued

Disease/condition	Level of health care service provision				
	Community/Health Post	Health Centre	1st level district hospital	2nd level general hospital	3 rd level central hospital
Assumptions: 40% get home based care of whom 15 %reach health facilities					
AIDS	Home based care, promotion of condom use, IEC/ Counselling and follow up, treatment of symptoms, provision of condoms, logistic supplies, supplementary feeding, screening and referral.	Counselling, screening, treatment of symptoms, provision of condoms, referral for confirmation.	Referral of complicated cases, screening, diagnosis confirmation, counselling, condom distribution, treatment including blood transfusion, refer back to HC/HP for follow-up	Nil unless respiratory and renal support	Nil unless heamopoletic malignancies
Diarrhoea	Prevention, ORS, construction of well, sanitation, referral, IEC/Standard mgt no dehydration with ORS, supervision of CHWs, IEC, referral, demo, monitoring of choleraa	Case management (family health corner) some dehydration, IEC, diagnosis.	Case management of complicated sever dehydration, IEC, diagnosis, microscopy, electrolytes.	Nil	Nil

Appendix 8 continued: Package list by disease/condition

Disease/condition	Level of health care service provision				
	Community/Health Post	Health Centre	1st level district hospital	2nd level general hospital	3 rd level central hospital
Assumptions: 50% of all DALYs lost due to lack if antenatal care and 50% due to unsafe abortions					
Perinatal	FP Health ed., TT, Prophylactic medication, safe delivery, danger signs, risk factors, nutrition/ ANC, distbn of delivery kits, FP, TT, HE on safe delivery, danger signs, risk factors, nutrition, refer high risk cases	ANC, FP, HE, TT, immunisations, HE on safe delivery, danger signs, referral of high risk pregnancies and infants	ANC, HE, TT, FP, emergency caesarian sections, incubator care, neonates, post natal care, immunisations.	Complicated pregnancies, surgery for infant hydrocephalus, ICU, acute respiratory and renal support	Severely complicated pregnancies, surgery for congenital malfunctions, acute renal failure.
Assumptions: none indicated					
Tuberculosis/leprosy	IEC, HBC/ IEC, HBC, contact and defaulter tracing, follow-up (DOTS) IEC, HBC/ Supply of blister pack, referral	IEC, lab diagnosis, treatment as per standard guidelines, and management of referred cases, register maintenance. Treatment, lab test	IEC, x-ray, lab diagnosis, std. treatment, register + follow-up managemtne Lab diagnosis, std. treatment, follow-up management.	Chronic lung disease management, respiratory support. Nil	Nil except for resistance monitoring and laboratory quality assurance Nil

Appendix 8 continued: Package list by disease/condition

Disease/condition	Level of health care service provision				
	Community	Health Post	Health Centre	1st level district hospital	2nd /3 rd level general & central hospital
Assumptions: 50% demand due to mild malnutrition, 40 % demand due to moderate malnutrition, 10% due to severe malnutrition					
Malnutrition	Growth monitoring under fives, HE and training on ORS, deworming, child feeding, iodinated salt, malaria control.	Screening, growth monitoring and follow-up, water and sanitation educations, HE, training on ORS, proper child nutrition, counselling, deworming, early referral.	Screening, diagnosis, treatment of mild malnutrition, referral of moderate and severe cases, case management with vit A, HEPS.	Treatment of complications, Vit A supplementation, rehydration, management of infections, diet therapy.	Nil Nil
Assumptions: peptic ulcer, haemorroids, acute abdominal and unspecified GI symptoms, 40% of all demand from acute abdominal and unspecified GI conditions, 40% of demand from peptic ulcer and 20% from haemorroids					
Other gastro-intestinal conditions	Nil	Examination of abdominal pain, referral	Case management (suppositories antacids), referral.	Case management for intestinal complications	Surgery for intestinal complications/ Nil unless for GI malignancies

Appendix 9: Areas of agreement and disagreement on contracting and referrals between districts and referral hospitals

Broad and sub themes	Areas of agreement	Areas of disagreement
Policy of internal contracts: Positive attributes of internal contracts. Difficulties of CBOH contracts with districts and hospitals. Difficulties of contracts between districts and hospitals. Suggestions for improving contracts.	The fact that DHBs and RHBs are able to meet and discuss referral issues was a positive sign. Without contracts more people would just be going straight to the hospitals without referral. Since hospitals were paid for referral services, they were held accountable by DHBs. Both DHBs and RHBs complained about the expenditure restrictions Payments for referrals were arbitrarily determined and not related to workload.	RHBs argued that the referral grant paid by DHBs were inadequate. The DHBs observed that grants received from CBOH were also inadequate. DHBs kept to the low end of the 20-40 % range, while hospitals would have preferred higher levels. Hospitals suggested that referral grants should be paid directly to hospitals. DHBs observed that hospitals charged referred cases, in contravention of health financing policy.
Transaction environment: Distribution and ownership of health facilities. Levels and management difficulties of frontline providers. Incentives/sanctions for frontline providers.	DHBs and RHBs contracted in historically determined ways. The DHBs and RHBs had no effective control over staff as most were employed by the PSC. Managers felt frustrated that they were not able to discipline erring PSC staff. Weak financial position meant that DHBs and RHBs were unable to employ staff on board conditions.	DHBs expressed more satisfaction with NGO then public hospitals. Hospitals observed that DHB doctors were more likely to be in management than clinical positions.

Appendix 9 continued

Broad and sub themes	Areas of agreement	Areas of disagreement
Referral practice: Sources of referral problems: District-based Community-based Hospital-based	*District level:* Lack of medical facilities in clinics resulted in high referral loads. Inadequacy/limited capacity of frontline providers also increased referral pressures. *Community level:* Delays in deciding to seek care; bringing severely ill people during off normal-hours; administering of local medications before presentation to health centres. *Hospital level* The lack of feed-back from hospitals. Limited care provided to referred cases at hospitals. Tendency of hospital providers to charge referred cases.	Hospitals argued that sometimes health centres referred in order to reduce their workload. DHBs in turn argued that health hospitals behaviour was undesirable (eg. charging referred patients). Hospitals argued that despite meetings held to address referral issues, the referral problems had persisted.
Solutions for referral problems:	Provision of more in-service training opportunities and transport facilities for referrals. Health promotion activities to encourage better community health practices such as early seeking of care and improved utilisation of community-based health services. Provision of feed-back for referred patients to enhance local health facility knowledge and ensure continuation of care.	Hospitals maintained that they were unable to provide feed-back because of heavy workload. DHBs, however, maintained that feed-back for critical conditions would be valuable

Appendix 9 continued

Broad and sub themes	Areas of agreement	Areas of disagreement
Views on referral policies Closing of hospital OPD Introduction of by-pass fees Improvement of health centre capacity	Hospitals where clinics had not been upgraded were of the view that policy would help improve referral appropriateness. There was a general consensus that by-pass fees were very minimal and did not significantly deter people from by-passing health centres.	Hospitals observed that closing the OPD had not helped, since the workload had been transferred to the casualty wing. Hospitals suggested that it would be better to do away with the HAHC. District staff to HAHC were accused of moonlighting. Improving capacities in health centres did not seem to have helped much as the pressure on the hospital was reported to have been sustained.

Appendix 10: Comparison of contracting and referrals between districts with upgraded and non-upgraded health facilities

Contracting/referral aspect	Contracting environment	
	Health facilities upgraded	Health facilities not upgraded
Policy of internal contracts: Positive attributes of internal contracts Difficulties of CBOH contracts with districts and hospitals. Difficulties of contracts between districts and hospitals Suggestions for improving contracts.	Contracting enabled both districts with and without upgraded health facilities to meet and discuss referral issues. If it were not for contracts, managing referrals would have been more difficult. Since hospitals were paid for referral services, they were held accountable by DHBs. Both districts with upgraded and those without upgraded health facilities complained about the expenditure ceilings imposed by the CBOH. Both type of districts observed that the method for referral grants was arbitrary and not related to workload. Hospitals complained about the low grants that they got from DHBs for hospital services.	
	Hospitals were of the view that the CBOH should remit money directly to the hospital. In order to rationalise access to hospitals, the OPD had been closed. Staff at health centres identified problems of referral pressures from feeder clinics. There were mixed views about the effectiveness of upgraded health centres to reducing referrals. RHB managers questioned why congestion at the hospital had persisted despite the upgrading.	Districts observed that the capacity of their health centres was limited. Districts had tried to improve competencies in health centres by rotating doctors and having clinical meetings. There were plans at both Kitwe and Ndola hospitals to close the OPD.

Appendix 10 continued

Contracting aspect	Contracting environment	
	Health facilities upgraded	Health facilities not upgraded
Transaction environment The spatial distribution and ownership of health facilities. The level and management of frontline providers. Incentives/sanction facing frontline providers.	Districts and hospitals contracted on historical and spatial lines. Almost all the staff in DHBs and RHBs were employed by the PSC. Managers felt frustrated at being unable to discipline PSC staff who erred. The weak financial position limited the extent to which DHBs and RHBs could engage staff on board conditions of service. One of the strategies used by districts to resolve the problems of provider scarcities was to sponsor and subsequently bond graduates.	
	Although it was supposed to work as a national referral hospital, the UTH effectively ran as a district hospital. The multiplicity of worker categories at UTH complicated personnel management. The posting of doctors in health centres had had a limited impact on raising health centre capacity	The few doctors at the district were in management positions. Some districts had tried to alleviate the problem of staff shortages by directly engaging clinical students while at college, who were subsequently offered sponsorship and bonded to the district.

Appendix 10 continued

Contracting aspect	Contracting environment	
	Health facilities upgraded	Health facilities not upgraded
Views on referral strategies: Closing of hospital OPD Introduction of by-pass fees Improving capacity in health centres	Hospitals where OPDs had not been closed were of the view that the strategy would help rationalise referrals. There was a general consensus that by-pass fees were very minimal and did not significantly deter people from by-passing health centres. The by-pass fees had been arbitrarily set at the hospitals and the managers would have preferred a higher fee.	
	The manager of the hospital where the OPD had been closed observed that the strategy did not seem to be working since patients had switched from the OPD to casualty wing. The hospital suggested that it would be better to do away with the HAHC. The hospital manager was of the view that district doctors attached to the to HAHC were moonlighting and not spending enough time at the HAHC.	Districts complained their patients were made to pay despite the district having paid for hospitals beds. Kitwe and Ndola DHBs complained about the limited number of doctors, which made it difficult for them to rotate among health centres. Ndola observed that it would be administratively easier for UTH to close off the OPD because the buildings were physically detached from the main hospital, whereas this was not the case at Ndola.

Appendix 10 continued

<table>
<tr><td rowspan="2">Contracting aspect</td><td colspan="2">Contracting environment</td></tr>
<tr><td>Health facilities upgraded</td><td>Health facilities not upgraded</td></tr>
<tr><td rowspan="3">Sources of referral problems:
Community
District
Hospital</td><td colspan="2">District level:
Limited medical facilities in clinics resulted in high referral volumes to hospitals.
Heavy workload in heath centres exacerbated the high rate of referrals to hospitals.
The transport inadequacies negatively impacted on the referral system.

Community level:
Delays in deciding to seek care, which resulted in medical complications
The tendency of caregivers bringing severely ill people during off normal-hours;
The administering of local medications before presentation to health centres, which results in complications.

Hospital level:
The lack of feed-back from hospitals and tendency of hospitals to charge referred patients.
The limited provision of limited care to referred patients at the hospitals.</td></tr>
<tr><td>Health centres with better staffing levels were able to provide more services.
The providers at health centres argued that they treated most malaria cases within clinics.
Cases of non-clinical for referring were mentioned such as limited bed space.
Providers conceded that inappropriate referrals were more likely where there were more enrolled nurses.
The districts had tried to improve provider competency through holding clinical meetings.</td><td>HCs had limited lacked diagnostic facilities and providers.
HCs were more likely to be run by nurses and hence there was a high likelihood of inappropriate referrals.
Districts had tried to improve capacity by rotating doctors in health centres with limited effect.</td></tr>
</table>

Appendix 10 continued.

<table>
<tr><td rowspan="2">Contracting aspect</td><td colspan="2">Contracting environment</td></tr>
<tr><td>Health facilities upgraded</td><td>Health facilities not upgraded</td></tr>
<tr><td rowspan="2">Solutions for referral problems:
District-based
Community-based
Hospital-based
Contract-based</td><td colspan="2">District level:
Provision of more in-service training opportunities in order to improve the capacity of providers.
Improving the capacity of health centres through the provision of facilities and better-qualified staff.
While upgrading health centres had improved the effectiveness of clinics, building district hospital was be the ultimate solution.

Community:
Health promotion activities to encourage better health practices.
Health education activities to raise the communities utilisation of health centres.

Hospital level:
Provision of feed-back for referred patients to enhance local health facility knowledge and ensure continuation of care.
Cessation of hospital practice of surcharging referred patients.

Contract based:
Inclusion of sanctions to be applied in cases of default on either side.</td></tr>
<tr><td>Hospitals argued that they should be paid directly for the provision of 1st and 2nd referral services.
Feeder health facilities contributed to pressure on up-graded health centres.
Upgraded health centres were sometimes made to write referral letters for patients from institutional clinics so that the patient avoids paying at the hospital.</td><td>Districts expressed misgivings about the value for money spend on purchase of hospital beds.
Districts acknowledged that tying payments to indicators of referral workload was desirable, although difficult to implement.
Upgrading of health centres as had been done in Lusaka would help improve capacity in health centres.</td></tr>
</table>

Appendix 11: Comparison of contracting and referrals between contracts with governmental and non-government hospitals

Contracting aspect	Contracting environment	
	NGO hospitals	Government hospitals
Policy of internal contracts: Positive attributes of internal contracts Difficulties of CBOH contracts with district and hospitals Difficulties of contracts between DHBs and RHBs	As in x1 above, contracting enabled RHBs and under both NGO and public contracts to meet and discuss referral issues. If it were not for contracts, managing referrals would have been more difficult. Since hospitals are paid for referral services, they are held accountable by DHBs. The districts with both types of contracts complained about the expenditure ceilings imposed by the CBOH. Both the districts and hospitals observed that the method used to determined referral was arbitrary and not relate to referral workload. The hospitals complained about the low referral grant from districts.	
	Hospitals had prior agreements with DHBs about how much they would pay for services. NGO hospitals were less likely to report problems with the HAHC unit. Besides contracts with the CBOH, NGO hospitals had contracts with their mission agencies.	Contracts were more likely to be informal. In order to improve the allocation of referral grants, hospitals suggested direct payment of grants to hospitals. Government hospitals had less capacity for negotiating contracts.

Appendix 11 continued

Contracting aspect	Contracting environment	
	NGO hospitals	Government hospitals
Transaction environment: The spatial distribution Ownership of health facilities. Levels and management of frontline providers Incentives/sanctions facing frontline providers	As in x1, Districts and hospitals contracted on historical and spatial lines. Almost all the staff in DHBs and RHBs were employed by the PSC. Managers felt frustrated at being unable to discipline PSC staff who erred. The weak financial position limited the extent to which DHBs and RHBs could engage staff on board conditions of service. One of the strategies used by districts to resolve the problems of provider scarcities was to sponsor and subsequently bond graduates	
	NGO hospital had more control over staff. Hospital observed that staff not happy with mission working environment were more likely to leave and join the public sector. Mission hospitals had non-clinical managers. Mission hospitals had more leverage in dealing with staffing problems by asking for their transfer to government hospitals, when they were not happy with their performance.	Government managers did not have effective control over PSC employees. The managers felt frustrated that they were not able to discipline erring staff because of the elaborate procedures for dealing with personnel matters. Hospital managers observed that the few doctors in districts were playing management roles. Where there was a choice DHBs expressed more satisfaction with NGO hospitals.

Appendix 11 continued

Contracting aspect	Contracting environment	
	NGO hospitals	Government hospitals
Views on referral strategies: Closing of hospital Out Patient Departments Introduction of by-pass fees Improving capacity in health centres	Hospitals where OPDs had not yet been closed were of the view that the strategy would help Rationalise referrals. There was a general consensus that by-pass fees were very minimal and did not significantly deter people from by-passing health centres. The by-pass fees had been arbitrarily set at the hospitals and the hospitals manager would have preferred a higher fee.	
	Staff reported that the location of the HAHC within hospital perimeters sometimes induced demand for referral to the hospital.	Kitwe and Ndola DHBs complained about the limited number of doctors, which made it difficult for them to rotate among health centres. The introduction of the HAHC had not helped matters, since demand had shifted to the casualty unit. The effectiveness of the HAHC had been undermined by management difficulties of doctors attached to the HAHC.

Appendix 11 continued

Contracting aspect	Contracting environment	
	NGO hospitals	Government hospitals
Sources of referral problems: District Community Hospital	*District level:* Limited medical facilities in clinics resulted in high referral volumes to hospitals. Heavy workload in heath centres exacerbated the high rate of referrals to hospitals. The transport inadequacies negatively impacted on the referral system. *Community level*: Delays in deciding to seek care, which resulted in medical complications The tendency of caregivers bringing severely ill people during off normal-hours; The administering of local medications before presentation to health centres, which results in complications. *Hospital level*: The lack of feed-back from hospitals and tendency of hospitals to charge referred patients. The limited provision of limited care to referred patients at the hospitals.	
	The better facilities in mission hospitals generated demand for services. Community expectations about better services generated pressure on providers for referrals. The hospital was less likely to report problems with the referral practices of feeder clinics NGO hospitals were more likely to provide feed-back to health centres.	HCs lacked diagnostic facilities and staff. HCs were more likely to be run by nurses and hence more likely to make inappropriate referrals. Districts tried to improve capacity of health centres by rotating doctors in HCs.

Appendix 11 continued

Contracting aspect	Contracting environment	
	NGO hospitals	Government hospitals
Suggested solutions for referral problems: District-based Community-based Hospital-based Contract-based	*District level:* Provision of more in-service training opportunities in order to improve the capacity of providers. Improving the capacity of health centres through the provision of facilities and better-qualified staff. While upgrading health centres had improved the effectiveness of clinics, building district hospital was be the ultimate solution. *Community level:* Health promotion activities to encourage better health practices. Health education activities to raise the communities utilisation of health centres. *Hospital level:* Provision of feed-back for referred patients to enhance local health facility knowledge and ensure continuation of care. Cessation of hospital practice of surcharging referred patients. *Contract based influences:* Inclusion of sanctions to be applied in cases of default on either side.	
	District should raise capacities in their areas in order to minimise on referrals to hospitals.	Districts expressed misgiving about the value for money spent on purchase of hospital services. Recognised that tying payment to indicator of referral workload was difficult.

Appendix 12: Frontline providers' educational and professional background, and views/experiences about/with the referral process

Broad and sub themes	Major findings	Key differences
Education background: Length of education Workshops and in-service training	All the frontline providers had completed secondary school level of education. The providers noted that there were more in-service training facilities in districts than hospitals. The availability of skills-upgrading opportunities provided an incentive for working in health centres.	There were more opportunities for in-service training in districts than hospitals. The training opportunities in districts had in some cases pulled staff away from hospitals to districts.
Professional background: Professional qualification Previous employment Current position Reason for moving	The providers were either nurses or clinical officers, most of whom had post-graduate qualifications. Almost all respondents had been employed in the civil service upon qualification. Movement within the public sector were widespread. The reasons for the movements were either on social grounds such as marriage and routine changes of postings by District Health authorities.	There were hardly any cases of providers joining the public from the private sector. The relatively higher remuneration levels in the private sector was a source of attraction.
Professional goals: Professional goals Opportunities for attaining the goals Constraints against attaining the goals	Most of the staff had joined the public sector after graduating The providers ultimately aspired to be employed in the private/NGO sector. These ambitions could be thwarted by: lack of finances, contacts, qualifications, family responsibilities and competition. The providers expressed a high level of commitment to serving the community.	As under educational background above, there were instances of respondents who had left hospitals to work in health centres on account of the skill-upgrading opportunities available in the latter.

Appendix 12: continued

Broad and sub themes	Major findings	Key differences
Work Environment: Positive attributes about the work environment Negative attributes about the work environment	As above, providers appreciated the learning opportunities availed by DHBs. They bemoaned the limited facilities clinics. Work-related scenarios that providers said they avoided: death of patients in their care, receiving tips from patients, involvement in corrupt practices; and workplace infection risks.	Providers observed that in health centres, they were morel likely to improve their clinical skills since they did most work with limited supervision. This was unlikely in hospital settings, where they worked under supervision.
Referral practices-General: How patients are referred Indicators used to assess illness severity Referral practices by type of staff	Providers said they were knowledgeable about how the referral process is supposed to work. However, inadequacies of the working environment limited the appropriate functioning of referral systems.	There were cases where referrals were made using other than severity of illness: lack of bed space, pressure from patients for referral. There was a widely held view that clinical officers were more likely to make appropriate referral decisions than nurses.
Referral practices-Malaria and pneumonia: How patients are referred Indicator used to assess illness severity Referral practices by type of staff	Methods used for deciding on referral for malaria cases: non-response to initial lines of treatment; cases of cerebral malaria. Methods used for deciding on referral of pneumonia case: fast breathing; chesk-in-drawing.	As above, there were cases where referrals were made using other than severity of illness: lack of bed space, pressure from patients for referrals. There was a widely held view that clinical officer were more likely to make appropriate referral decisions than nurses.

Appendix 13: Cross tabulations of referral appropriateness by contracting context

CROSS TABULATIONS OF INDICATORS OF MALARIA REFERRAL APPROPRIATNESS BY THE TYPE OF CONTRACTING CONTEXT (UPGRADED OR NOT-UPGRADED)

WAS REFERRAL APPROPRIATE (1st EXPERT OPINION)

Was referral appropriate? (ref 1) (1st opinion)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Yes	Count	86	460	546
	% within ref1	15.8%	84.2%	100.0%
	% within contract type	72.9%	78.9%	77.9%
No	Count	32	123	155
	% within ref1	20.6%	79.4%	100.0%
	% within contract type	27.1%	21.1%	22.1%
Total	Count	118	583	701
	% within ref1	16.8%	83.2%	100.0%
	% within contract type	100.0%	100.0%	100.0%

HCs: Health centres

Chi-Square Tests(c)

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.066(b)	1	.151		
Continuity Correction(a)	1.731	1	.188		
Likelihood Ratio	1.987	1	.159		
Fisher's Exact Test				.180	.096
Linear-by-Linear Association	2.063	1	.151		
N of Valid Cases	701				

WAS REFERRAL APPROPRIATE? (2nd EXPERT OPINION)

Was referral appropriate (ref 2)? (2nd opinion)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Yes	Count	59	434	493
	% within ref2	12.0%	88.0%	100.0%
	% within contract type	83.1%	74.7%	75.6%
No	Count	12	147	159
	% within ref2	7.5%	92.5%	100.0%
	% within contract type	16.9%	25.3%	24.4%
Total	Count	71	581	652
	% within ref2	10.9%	89.1%	100.0%
	% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.421(b)	1	.120		
Continuity Correction(a)	1.987	1	.159		
Likelihood Ratio	2.601	1	.107		
Fisher's Exact Test				.143	.076
Linear-by-Linear Association	2.417	1	.120		
N of Valid Cases	652				

a Computed only for a 2x2 table
b 0 cells (.0%) have expected count less than 5. The minimum expected count is 17.31.
c Malaria pneumonia = 1.00

DID THE ADMITTED CASE SURVIVE?

Survival status of admitted case (Survstatus)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Dead	Count	18	31	49
	% within Survstatus	36.7%	63.3%	100.0%
	% within contract type	17.3%	5.4%	7.2%
Alive	Count	86	548	634
	% within Survstatus	13.6%	86.4%	100.0%
	% within contract type	82.7%	94.6%	92.8%
Total	Count	104	579	683
	% within Survstatus	15.2%	84.8%	100.0%
	% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	18.917(b)	1	.000		
Continuity Correction(a)	17.164	1	.000		
Likelihood Ratio	14.960	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	18.889	1	.000		
N of Valid Cases	683				

WAS REFERED CASE ADMITTED AT HOSPITAL?

Was case admitted or not? (admitted)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Yes	Count	95	300	395
	% within Admitted	24.1%	75.9%	100.0%
	% within contract type	85.6%	98.7%	95.2%
No	Count	16	4	20
	% within Admitted	80.0%	20.0%	100.0%
	% within contract type	14.4%	1.3%	4.8%
Total	Count	111	304	415
	% within Admitted	26.7%	73.3%	100.0%
	% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	30.414(b)	1	.000		
Continuity Correction(a)	27.625	1	.000		
Likelihood Ratio	26.173	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	30.340	1	.000		
N of Valid Cases	415				

HOW LONG DID IT TAKE FOR THE TEMPERATURE OF CASE TO NORMALISE DURING ADMISSION?

Time taken for temperature to normalise (Treatment)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
W24	Count	42	102	144
	% within Treatment	29.2%	70.8%	100.0%
	% within contract type	48.8%	46.2%	46.9%
24-28	Count	8	62	70
	% within Treatment	11.4%	88.6%	100.0%
	% within contract type	9.3%	28.1%	22.8%
48-72	Count	8	17	25
	% within Treatment	32.0%	68.0%	100.0%
	% within contract type	9.3%	7.7%	8.1%
>72	Count	28	40	68
	% within Treatment	41.2%	58.8%	100.0%
	% within contract type	32.6%	18.1%	22.1%
Total	Count	86	221	307
	% within Treatment	28.0%	72.0%	100.0%
	% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(b)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.683(a)	3	.001
Likelihood Ratio	17.065	3	.001
Linear-by-Linear Association	3.338	1	.068
N of Valid Cases	307		

CROSS TABULATIONS OF INDICATORS OF PNEUMONIA REFERRAL APPROPRIATNESS BY THE TYPE OF CONTRACTING CONTEXT (UPGRADED AND NON-UPGRADED HEALTH CENTRES)

WAS REFERRAL APPROPRIATE (1st EXPERT OPINION

Was referral appropriate? (ref 1) (1st opinion)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Yes	Count	588	33	621
	% within rec was ref1	94.7%	5.3%	100.0%
	% within Sppted	86.7%	97.1%	87.2%
No	Count	90	1	91
	% within rec was ref1	98.9%	1.1%	100.0%
	% within Sppted	13.3%	2.9%	12.8%
Total	Count	678	34	712
	% within rec was ref1	95.2%	4.8%	100.0%
	% within Sppted	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.101(b)	1	.078		
Continuity Correction(a)	2.243	1	.134		
Likelihood Ratio	4.263	1	.039		
Fisher's Exact Test				.109	.053
Linear-by-Linear Association	3.097	1	.078		
N of Valid Cases	712				

WAS REFERRAL APPROPRIATE? (2nd EXPERT OPINION)

Was referral appropriate? (ref 2) (1st opinion)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Yes	Count	595	33	628
	% within rec was ref2	94.7%	5.3%	100.0%
	% within Sppted	95.2%	97.1%	95.3%
No	Count	30	1	31
	% within rec was ref2	96.8%	3.2%	100.0%
	% within Sppted	4.8%	2.9%	4.7%
Total	Count	625	34	659
	% within rec was ref2	94.8%	5.2%	100.0%
	% within Sppted	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.249(b)	1	.618		
Continuity Correction(a)	.007	1	.934		
Likelihood Ratio	.283	1	.595		
Fisher's Exact Test				1.000	.516
Linear-by-Linear Association	.248	1	.618		
N of Valid Cases	659				

DID THE ADMITTED CASE SURVIVE?

Survival status of admitted case (Survstatus)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Dead	Count	146	7	153
	% within Survstatus	95.4%	4.6%	100.0%
	% within Sppted	22.6%	21.2%	22.5%
Alive	Count	501	26	527
	% within Survstatus	95.1%	4.9%	100.0%
	% within Sppted	77.4%	78.8%	77.5%
Total	Count	647	33	680
	% within Survstatus	95.1%	4.9%	100.0%
	% within Sppted	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.033(b)	1	.856		
Continuity Correction(a)	.000	1	1.000		
Likelihood Ratio	.033	1	.855		
Fisher's Exact Test				1.000	.527
Linear-by-Linear Association	.033	1	.856		
N of Valid Cases	680				

DID THE ADMITTED CASE SURVIVE?

Was case admitted or not (admitted)		Contracting context		Total
		HCs Upgraded	HCs Not-upgraded	
Yes	Count	616	34	650
	% within Admitted	94.8%	5.2%	100.0%
	% contract type	95.7%	100.0%	95.9%
No	Count	28	0	28
	% within Admitted	100.0%	.0%	100.0%
	% within contract type	4.3%	.0%	4.1%
Total	Count	644	34	678
	% Admitted	95.0%	5.0%	100.0%
	% within contact type	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.542(b)	1	.214		
Continuity Correction(a)	.639	1	.424		
Likelihood Ratio	2.944	1	.086		
Fisher's Exact Test				.390	.230
Linear-by-Linear Association	1.540	1	.215		
N of Valid Cases	678				

CROSS TABULATIONS OF MALARIA REFERRAL APPROPRIATNESS CONTRACTING CONTEXT (GOVERNMENTAL AND NGO HOSPITALS)

WAS REFERRAL APPROPRIATE (1st EXPERT OPINION

Was referral appropriate? (1st opinion)			Contracting context		Total
			Govt hospital	NGO hospital	
ref1	Yes	Count	546	70	616
		% within ref1	88.6%	11.4%	100.0%
		% within contract type	77.9%	37.8%	69.5%
	No	Count	155	115	270
		% within ref1	57.4%	42.6%	100.0%
		% within contract type	22.1%	62.2%	30.5%
Total		Count	701	185	886
		% within ref1	79.1%	20.9%	100.0%
		% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	110.816(b)	1	.000		
Continuity Correction(a)	108.934	1	.000		
Likelihood Ratio	103.372	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	110.691	1	.000		
N of Valid Cases	886				

WAS REFERRAL APPROPRIATE? (2nd EXPERT OPINION)

Was referral appropriate? (2nd opinion)			Contracting context		Total
			Govt hospital	NGO hospital	
ref2	Yes	Count	493	70	563
		% within ref2	87.6%	12.4%	100.0%
		% within contract type	75.6%	37.6%	67.2%
	No	Count	159	116	275
		% within rec2	57.8%	42.2%	100.0%
		% within contract type	24.4%	62.4%	32.8%
Total		Count	652	186	838
		% within rec was ref2	77.8%	22.2%	100.0%
		% within NGO	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	94.679(b)	1	.000		
Continuity Correction(a)	92.964	1	.000		
Likelihood Ratio	89.969	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	94.566	1	.000		
N of Valid Cases	838				

DID THE ADMITTED CASE SURVIVE?

Survival status of case			Contracting context		Total
			Govt hospital	NGO hospital	
Survstatus	Dead	Count	49	1	50
		% within Survstatus	98.0%	2.0%	100.0%
		% within NGO	7.2%	1.3%	6.6%
	Alive	Count	634	78	712
		% within Survstatus	89.0%	11.0%	100.0%
		% within NGO	92.8%	98.7%	93.4%
Total		Count	683	79	762
		% within Survstatus	89.6%	10.4%	100.0%
		% within NGO	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.032(b)	1	.045		
Continuity Correction(a)	3.126	1	.077		
Likelihood Ratio	5.716	1	.017		
Fisher's Exact Test				.051	.025
Linear-by-Linear Association	4.026	1	.045		
N of Valid Cases	762				

WAS REFERED CASE ADMITTED AT HOSPITAL?

Was case admitted? (admitted)			Contracting context		Total
			Govt hospital	NGO hospital	
13 Admitted	Yes	Count	395	82	477
		% within Admitted	82.8%	17.2%	100.0%
		% within contract type	95.2%	44.3%	79.5%
	No	Count	20	103	123
		% within Admitted	16.3%	83.7%	100.0%
		% within contract type	4.8%	55.7%	20.5%
Total		Count	415	185	600
		% within Admitted	69.2%	30.8%	100.0%
		% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	203.067(b)	1	.000		
Continuity Correction(a)	199.958	1	.000		
Likelihood Ratio	194.310	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	202.728	1	.000		
N of Valid Cases	600				

HOW LONG DID IT TAKE FOR THE TEMPERATURE OF ADMITTED CASE TO NORMALISE DURING ADMISSION?

			Contracting context		Total
Time taken for temperature to normalise (Treatment)			Govt hospital	NGO hospital	
	W24	Count	144	14	158
		% within Treatment	91.1%	8.9%	100.0%
		% within contract type	46.9%	21.2%	42.4%
	24-28	Count	70	36	106
		% within Treatment	66.0%	34.0%	100.0%
		% within contract type	22.8%	54.5%	28.4%
	48-72	Count	25	12	37
		% within Treatment	67.6%	32.4%	100.0%
		% within contract type	8.1%	18.2%	9.9%
	>72	Count	68	4	72
		% within treatment	94.4%	5.6%	100.0%
		% within contract type	22.1%	6.1%	19.3%
Total		Count	307	66	373
		% within Treatment	82.3%	17.7%	100.0%
		% within contract type	100.0%	100.0 %	100.0%

a Malaria pneumonia = 1.00

Chi-Square Tests(b)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.531(a)	3	.000
Likelihood Ratio	40.229	3	.000
Linear-by-Linear Association	.053	1	.818
N of Valid Cases	373		

CROSS TABULATIONS OF PNEUMONIA REFERRAL APPROPRIATNESS BY TYPE OF CONTRACT (NGO AND PUBLIC CONTRACTS)

Was referral appropriate? (ref 1) (1st opinion)		Contracting context		Total
		Govt hospital	NGO hospital	
Yes	Count	621	72	693
	% within ref1	89.6%	10.4%	100.0 %
	% within contract type	87.2%	53.3%	81.8%
No	Count	91	63	154
	% within ref1	59.1%	40.9%	100.0 %
	% within contract type	12.8%	46.7%	18.2%
Total	Count	712	135	847
	% within ref1	84.1%	15.9%	100.0 %
	% within contract type	100.0%	100.0%	100.0 %

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	87.595(b)	1	.000		
Continuity Correction(a)	85.332	1	.000		
Likelihood Ratio	72.389	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	87.491	1	.000		
N of Valid Cases	847				

WAS REFERRAL APPROPRIATE? (2nd EXPERT OPINION)

Was referral appropriate? (ref 2) (2nd opinion)			Contracting context		Total
			Govt hospital	NGO hospital	
rec was ref2	1.00	Count	628	70	698
		% within ref2	90.0%	10.0%	100.0%
		% within contract type	95.3%	51.9%	87.9%
	2.00	Count	31	65	96
		% within ref2	32.3%	67.7%	100.0%
		% within contract type	4.7%	48.1%	12.1%
Total		Count	659	135	794
		% within ref2	83.0%	17.0%	100.0%
		% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	198.964(b)	1	.000		
Continuity Correction(a)	194.897	1	.000		
Likelihood Ratio	148.539	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	198.713	1	.000		
N of Valid Cases	794				

DID THE ADMITTED CASE SURVIVE?

Survival status of admitted case			Contracting context		Total
			Govt hospital	NGO hospital	
Survstatus	1.00	Count	153	3	156
		% within Survstatus	98.1%	1.9%	100.0%
		% within contract type	22.5%	4.3%	20.8%
	2.00	Count	527	66	593
		% within Survstatus	88.9%	11.1%	100.0%
		% within contract type	77.5%	95.7%	79.2%
Total		Count	680	69	749
		% within Survstatus	90.8%	9.2%	100.0%
		% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12.518(b)	1	.000		
Continuity Correction(a)	11.441	1	.001		
Likelihood Ratio	16.692	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	12.501	1	.000		
N of Valid Cases	749				

WAS REFERED CASE ADMITTED AT HOSPITAL?

Was case admitted? (admitted)		Contracting context		Total
		Govt hospital	NGO hospital	
Yes	Count	650	72	722
	% within Admitted	90.0%	10.0%	100.0%
	% within contract type	95.9%	54.1%	89.0%
No	Count	28	61	89
	% within Admitted	31.5%	68.5%	100.0%
	% within contract type	4.1%	45.9%	11.0%
Total	Count	678	133	811
	% within Admitted	83.6%	16.4%	100.0%
	% within contract type	100.0%	100.0%	100.0%

a Malaria pneumonia = 2.00

Chi-Square Tests(c)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	198.232(b)	1	.000		
Continuity Correction(a)	193.983	1	.000		
Likelihood Ratio	144.407	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	197.987	1	.000		
N of Valid Cases	811				