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HOSPITAL MANAGEMENT IN A TIME OF CHANGE

THE NEED FOR MANAGEMENT TRAINING (AND POLICY REFORM) IN THREE TEACHING HOSPITALS IN YUNNAN

Submitted by
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A thesis submitted in total fulfilment

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LIST OF ABBREVIATIONS

ALOS	Average Length of Stay
CEOs	Chief Executive Officers
CMRS	Contract Managerial Responsibility System
CMC	Cooperative Medical Care
CPC	The Communist Party of China
CT	Computerised Tomography
DEA	Data Envelopment Analysis
DM	Departmental Manager
DRGs	Diagnosis Related Groups
DRS	Director Responsibility System
EpInfo6	A Word Processing, Database, and Statistics System for Epidemiology on Microcomputers (Version 6)
GA	General Administrator
GDP	Gross Domestic Product
GHI	Government Health Insurance
HCOs	Health Care Organisations
JVHMTP	Jiangsu-Victoria Hospital Management Training Program
KMC	Kunming Medical College
LHI	Labour Health Insurance
MBA	Master of Business Administration
MOPH	The Ministry of Public Health
MRI	Magnetic Resonance Imaging
OPD	Outpatient Department
PM	Presidential Manager
PRS	President Responsibility System
PHB	Provincial Health Bureau
PLA	People's Liberation Army

RMB	Renminbi (Yuan, Chinese Currency)
SPSS	Statistical Package for the Social Sciences

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ABSTRACT

China commenced economic reform in the late 1970s and health system reform during the early 1980s. Both programs of reform have changed the environment in which Chinese hospitals operate. Hospitals presently face complex challenges including: effecting rational resource allocation in the face of increasing competition; maintaining quality services in the face of declining government funding; exercising full responsibility while government controls are only partially lifted; and generating an increasing proportion of total revenue from user charges whilst ensuring access to care for the poor. These challenges have profound implications for the roles of hospital managers.

A study of the needs for health management education was undertaken in three teaching hospitals in Kunming. Three main data sources were used - a questionnaire survey of 342 managers, interviews with 20 selected managers and a review of administrative data. The questions were designed to throw light, first, on current levels of performance, second, on the degree to which shortfalls in performance can be attributed to lack of management knowledge and skills (as distinct from perverse incentives imposed by the policy environment), and third, on priorities for the development of hospital management training.

There are clearly some shortfalls in organisational performance in the three hospitals, including in the areas of quality and efficiency. There is widespread agreement among managers that they need management training to help them to cope with the challenges they are facing as managers. However, it is also clear that there are structural barriers and perversities in the policy context which would prevent even the best trained managers from achieving high levels of quality and efficiency.

Management education is essential for improving organisational performance in Chinese hospitals and resolving some of the very difficult policy questions. Managers need understanding and skills which will enable them to cope with the constraints and exploit the opportunities of the rapidly evolving system and also contribute to the continuing processes of policy reform.

Training programs developed for Chinese hospital managers need to offer competencies that will enable managers to deal with the practical problems that they face in their daily work and also to contribute to solving some of the system issues which frame many of those practical problems.

STATEMENT OF AUTHORSHIP

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma.

No other person's work has been used without due acknowledgment in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

22 October 1998

Chapter One

INTRODUCTION

This research was conceived as part of a longer term project: to contribute to improved hospital performance by providing appropriate management training for hospital managers. In this thesis I present a descriptive case study of hospital management in a time of change. In particular, I have delineated some of the dynamics whereby managerial competence and factors in the wider policy environment interact to shape managers' practice and thereby shape hospital performance. This description provides a basis for judgements about management training needs locally and suggests lines for further research regarding the conditions for improving hospital performance nationally.

The People's Republic of China began to introduce economic reforms following the Third Plenum of the 11th Central Committee of the Chinese Communist Party (CCP) in December 1978. These reforms aimed to transfer the economic system from a socialist planned economy to a socialist market economy. They have encouraged individual initiative and transformed economic conditions nationwide. The reforms have also brought about important changes to the Chinese health care system. The health care sector in China has experienced several reforms since the founding of the new China but the current changes can be said to be the most profound, because of their unprecedented scope and depth and as a consequence of the parallel reforms in China's economic system. They are the most significant attempt at reform by the government since 1949.

China's hospital system has undergone many changes associated with the health sector reform. Chinese hospitals have traditionally been managed in a centralised system with relatively little autonomy at the hospital or department level. With the health system reforms, government funding has been reduced and hospitals are under pressure to raise an increasing proportion of revenue through user charges. The management system has been reformed with a devolution of managerial responsibility from government bureaux to hospitals and their departments. There is widespread

recognition of the relative lack of trained management as a limitation on hospitals' capacities to cope with the new challenges they face. However, the situation is more complicated because, with the dismantling of collectivised agriculture and the progressive reform of the state-owned enterprise sector, the infra-structure which had previously underwritten people's access to health care in China has collapsed. This change has had a profound impact on access to care for over 80% of China's 1.3 billion population.

Despite the developments in economic reform, there have been very few systematic studies of the key issues concerning the role of health management education in improving hospital performance at a time of change in China. This study aims to investigate these issues from the point of view of managers' own experience.

I am a medical graduate of Kunming Medical College (KMC). I trained and have worked in the KMC system for 18 years. After graduating from KMC in 1984, I moved into administration early in my career and became familiar with the issues in this area. Between 1991 and 1993, I studied for a Masters of Health Development degree at Chulalongkorn University, Thailand. In the course of undertaking the research component of the degree, I became interested in quality of care and focused my research on methods for evaluating quality of care in Chinese hospitals.

In my masters thesis I speculated that the problems with quality of care in Chinese hospitals in the 1980s were linked to the Cultural Revolution. China is a poor country but from 1949 improvements had been made as measured by the rapidly improving health status of the population. In a short period of time China had established a far-flung medical service network covering both urban and rural areas, changing the poor medical situation in the countryside and rationalising the distribution of urban medical institutions for the convenience of urban residents (Z. Chen, 1984, p. 82). The success of China's health care system dominated international health policy for many years.

However, from 1966 to 1976 the Great Proletarian Cultural Revolution disrupted formal education. In the first four years of the Cultural Revolution, medical, nursing and other training schools admitted no new students. Students already in medical school were given accelerated training and then went to work, usually in the

countryside (V. Sidel and R. Sidel, 1974, p. 113). Then the schools were shut down for several years, and many teachers and administrators were sent to the countryside to engage in more practical and politically relevant work.

In 1969 the medical schools began to resume admissions of new students, with an emphasis in their admission polity on workers, peasants and soldiers (often people with limited academic preparation) and 'barefoot doctors'. The standard medical course was a three-year program which only included ten subjects (compared to six years and thirty-eight subjects prior to the Culture Revolution) (V. Sidel and R. Sidel, 1974, p. 119).

Most urban hospitals rotated at least one-third of their staff to rural counties and communes. The barefoot doctors and other nonphysician health care workers became even more central to the health system. The standard of health care in China's urban hospitals was undoubtedly affected by the removal of a proportion of its staff, for mobile teams continued into the 1970s. However, the use of less skilled manpower was supported by the slogan 'technique is bourgeois' (Hillier and Jewell, 1983, p. 121). When the medical universities resumed there were many poorly trained doctors looking for jobs in the hospitals and some even moving into the medical schools as teachers (Henderson and Cohen, 1984, p. 3). The period 1966 - 76 was in some ways a very damaging one for the fabric of the Chinese health care system, its medical schools and hospitals.

I returned to KMC in 1994-5 and saw many quality of care problems in the hospitals. However, I realised that the problem of basic management needed to be addressed before quality of care could become a reality.

'Economic reform' and the 'Four Modernisations' (of agriculture, industry, science and technology, and defence) had begun. As a result of the post-1978 economic reforms, the devolution of managerial responsibility to the hospitals under Deng Xiaoping's policies (from 1978 onwards) had started. The hospitals were moving slowly from tight centralised control of relatively simple hospital services to more and more complex organisations with more responsibility for confronting new problems at the local level.

Thus the underlying causes of problems with quality of care might not lie in the methodologies for evaluating quality but more deeply in the management skills and resources required to steer through a period of rapid change.

Thus, I commenced the research described in this thesis with a concern about management problems in Chinese hospitals, particularly in KMC hospitals in Yunnan Province. My concern was based on uncertainties with respect to quality care, as in dissatisfied patients and medical accidents, and apparent inefficiencies, such as in the use of hospital resources. I was also aware of complaints from medical staff that managers lacked the ability to manage the hospitals. I knew that many hospital managers came from a clinical background and had no training in hospital management. I knew that there had been statements from the government recognising the need for systematic management training for all senior managers but that this had not been widely put into action. I was also aware that there was a policy dimension to the problems being faced but assumed that it was beyond the scope of hospital personnel to address.

The impressive efforts in providing management training for enterprise managers in China drew my attention. After the mid-1980s, many managers and supervisors in both state-owned and private enterprises underwent MBA programs (Child, 1994, p. 174). Many commentators have argued that management is a key factor in determining organisational success and failure. When good management is present, dramatic and rapid improvement can be made. Providing better managers, and training and educating current managers are responses to overcoming business failure (Whetten and Cameron, 1995, p. 5). So the aim of my research became to study how management education might contribute to better hospital management and hence better quality of services for patients. I have collected data from managers in one set of teaching hospitals in an attempt to cast light on present levels of performance, and on the degree to which shortfalls in performance may be due to a lack of management knowledge and skills among managers, and on priorities for the development of hospital management training.

Early in my research I developed a model to guide my research planning and to assist in organising my data and in structuring my analysis (see Figure 3.1, p. 61). The framework includes five main domains: organisational performance, management

practice, managers' competencies, personal and professional background, and the administrative and policy environment. The model is based on the idea that 'organisational performance' (including quality of care, efficiency and hospital development) is determined by patterns of management practice and the wider administrative and policy environment. Patterns of practice are shaped by managers' competence and by other factors in the wider environment.

My initial interest was in how educational programs might contribute to improved management: to what extent are patterns of management practice determined by the skills and knowledge (competencies) of managers and if so what kind of training might be needed. Relatively early during the research it became clear that factors in the wider organisational and policy environment were also very influential in shaping organisational outcomes and that the interactions between management competencies and organisational environment are complex and could not be sorted out easily. So the research questions became more about teasing out how 'competencies' and 'policy environment' interact in shaping management practice and thereby shape the outcomes of management, conceived in terms of organisational performance.

I collected data in the three teaching hospitals of the KMC system through a questionnaire survey of all 342 managers in the KMC hospital system and in-depth interviews with a subset of 20 more senior managers. I supplemented the survey and interview data with some reference to administrative data available from the hospitals' annual reports to the provincial health bureau.

In both the questionnaire survey and the interviews, the questions focused closely on recent achievements, current problems and obstacles, and desired reforms but were designed to cast light on the domains defined in the research model (organisational performance, patterns of management practice, management competence, and policy environment) and the relationships between these domains. There are other approaches to the study of hospital management including approaches which use more quantitative and more direct measures of performance, practice, competencies, background and environment. The methodology used in this research is based on the collection of opinion, experience and attitudes from managers. This reliance on qualitative data was partly because of the lack of access to more quantitative data, but the use of qualitative data has other strengths, in particular the rich text descriptions,

specificity of examples and the insights into system relationships which support interpretive inferences about causality.

This thesis contains nine chapters. In Chapter Two I review more systematically some of the key issues of history and the contemporary changes in the Chinese health care system, and in hospitals in particular. This includes: the advent of the economic reforms of Deng Xiaoping as they affected hospital management; a description of the structure of the health system and modern hospital system in China; the reform of the health sector and the current issues facing hospital managers; and health management education in China.

The research objectives and methods are outlined in Chapter Three. I introduce the research model which I relied upon for clarifying the research questions, collecting and organising my data, and structuring my analysis. I discuss the main elements and determinants of hospital performance. I also discuss the methods for data collection and my approach to analysing the data. The strengths and limitations of using these methods have also been discussed in this chapter.

The findings of the study are presented in Chapters Four to Eight. Each of the chapters addresses a domain as set out in the research model. Chapters Five to Eight which are the main domains of the research model are similarly structured: they start with a brief introduction to the chapter, followed by an overview of the findings reported in the chapter, then a discussion of the specific issues in more detail, and finally they contain conclusions on that particular theme. The conclusions of each of these chapters correspond to the sets of questions articulated in Chapter Three and are progressively presented in succeeding chapters and brought together in Chapter Nine.

The personal and professional background of hospital managers is documented in Chapter Four. I describe the profiles of the 342 managers within the KMC hospitals studied and discuss the possible influences of personal and professional background on managerial competencies.

The research model around which this study is structured assumes that the ultimate 'purpose' of hospital management is to contribute to improved hospital performance. My findings with respect to performance currently achieved, including

the provision of hospital services and organisational development are reported in Chapter Five.

The 'patterns of management practice' domain is the site where 'competencies' interact with the 'administrative and policy environment' to shape outcomes. Chapter Six documents the practice of hospital managers, particularly the aspects of their work which affect hospital performance.

Management competency is measured in Chapter Seven in terms of the knowledge areas and skills perceived by hospital managers as being necessary for successful performance of their jobs. Managers in this study had no formal management education, which is quite typical of the older generation of Chinese managers. However, many of them has considerable experience and keep insights into the working of the hospital system. It was important to document their views regarding management training needs.

Chapter Eight considers the ways in which the administrative and policy environment affects administrative outcomes in hospitals. In particular, it focuses on the influence of national health policy and the relationship between hospitals and their higher authorities, on hospital performance. The concept of 'environment' also includes the traditions and customs in which the hospital managers do their work. The barriers to the implementation of improved management practice in hospitals are also discussed in this chapter.

In Chapter Nine, the concluding chapter, I integrate the findings and conclusions from the previous chapters around the research model and consider the implications of these conclusions. It is clear from this research that there are significant shortfalls in organisational performance, and these shortfalls in hospital performance are due to both a lack of knowledge and skills and to adverse policy settings. The particular contribution of this thesis is to delineate in detail the ways in which the management competencies which managers bring to their work interact with the particularities of the Chinese policy environment in shaping patterns of management and determining the levels of hospital performance. Teasing out these interactions has important implications for the development of management training programs. Managers need to be educated, first, to cope with the 'usual' challenges of being a hospital manager;

second, to manage effectively in an environment where there are significant adverse situational pressures; and third, to contribute to policy development and to reducing the adverse pressures.

It is clear that management education is essential for improving organisational performance in Chinese hospitals. The critical question is what kind of training managers need to cope with the constraints and exploit the opportunities of the evolving system. This thesis provides some answers to this question.

Chapter Two

HEALTH CARE ADMINISTRATION AND HEALTH POLICY IN CHINA

The key aspects of Chinese health care policy and practice are presented, and the contemporary social and economic changes in China, in particular, in relation to their impact on the management and organisation in hospitals are discussed below. The chapter is divided into five sections. Following this introduction, first, I provide information about Yunnan Province where this study was carried out; second, I introduce China's economic reforms with a focus on the reform of state-owned enterprises and of the health sector; third, I introduce the health care system, the hospital system and reforms in China in more detail; fourth, I discuss the impact of health system reform on hospital management including health care policy, organisational structure and management of hospital personnel; fifth, I describe recent changes in the health financing and insurance system in China which have greatly affected the development of health care services; and finally I describe the provision of hospital management education and training in China.

China and Yunnan Province

China has a vast territory and rich natural resources. It has a total area of approximately 9.6 million square kilometres and a population of 1.3 billion, which is about 22% of the world's total.

According to the Constitution of China (Hinton, 1986): "the People's Republic of China is a socialist state under the people's democratic dictatorship led by the working class and based on the alliance of workers and peasants. The socialist system is the basic system of the People's Republic of China. All power in the People's Republic of China belongs to the people."

China is divided for administrative purposes into 22 provinces, five autonomous regions, and four municipalities, with Beijing, Shanghai, Tianjin and Chongqin, being

directly under the central government. The administrative units under a province or autonomous region include cities, autonomous prefectures, counties, and autonomous counties. The total number of counties in China exceeds 2,000 (Zheng and Hillier, 1995). The State Council, that is the central People's Government, is the highest executive organ of state power. It is responsible and accountable to the National People's Congress. On the local level there are local people's congresses with the local people's government as their executive organ in addition to other local organs of state administration.

Laaksonen (1988, p. 27-28) argued that in a socialist county with a mainly one-party system, administrative organisation of the state gives only a part of the total picture of the administration and decision-making powers. For example, the Communist Party of China (CPC) plays a role whose impact extends to nearly every part of the life both of organisations and individuals. The significance of the Party has changed since the communist revolution of 1949, but it remains a dominant power in the People's Republic of China.

Since 1949 and the founding of the new China, its political, economic and social structures have experienced a series of changes. Yet, the changes taking place after the economic reforms in 1978 may be the most profound. According to Jiang (1997) for more than ten years China's entire economy has embarked on a road of steady and healthy development. From 1992 through 1996, the gross national product rose by 12% a year on average. China's productive forces, overall national strength and living standards reached a new level.

Yunnan Province is situated in China's southwestern frontier. It is the eighth largest of China's 31 provinces, autonomous regions and municipalities with an area of 394,000 square kilometres, and has 36.97 million people (July 1990 census) (Foreign Affairs Office of Yunnan Province (FAOYP), 1995). It has two provincially administered municipalities, seven prefectures and eight autonomous prefectures. At a lower administrative level there are 13 prefectural administered municipalities; 81 counties; 29 autonomous counties and 4 districts under the Kunming Municipality.

Yunnan Province has one of the largest, and most varied, minority populations in China. It is the home of 25 different ethnic groups, comprising 33.4% of Yunnan's

total population according to the 1990 census (FAOYP, 1995). Yunnan is rich in natural resources but there is a considerable number of poor mountainous and minority regions where the national minorities comprise a significant proportion of the population. Of Yunnan's total area, the mountainous areas account for 94% and about 86.4% population live in rural areas, and almost all are engaged in agriculture. Transport and communications are very difficult in these areas.

Before the founding of the new China, Yunnan was an extremely poor and under-developed province. In rural areas the economy was basically self-sufficient. After the founding of the People's Republic of China in 1949, Yunnan's economy began to progress but the economy again had reverses during the Cultural Revolution and it began to stagnate. Since 1978, with the implementation of economic reform and China's open door policy, profound changes come to Yunnan. During the 1980s, the GNP of the province went from 8.43 billion yuan to 39.17 billion with an annual average growth rate of 10.6%. The province entered the 1990s at an increasing pace of reform. The GNP's average annual growth rate from 1991 to 1993 was 8.2%; the GNP in 1993 reached 64.8 billion yuan (FAOYP, 1995). However, Yunnan still has the lowest per capita gross national product in China (Carrad, McIntyre, Obst, and Shelton, 1989, p. 5).

Yunnan's social life has undergone changes since the 1980s as a result of China's open door and economic reform policies. Between 1983 and 1993, the employment rate among the urban population increased from 49.4% to 54.1%. By 1993, per capita annual income of urban inhabitants averaged 2,376 yuan, while the net income of farmers averaged 675 yuan per capita. The annual average consumption volume of urban and rural people was 616 yuan. Without consideration of inflation factors, the increase against the previous year was 8.2% for urban dwellers and 1.3% for rural residents reflecting a still very obvious difference between the two (FAOYP, 1995).

Kunming is the capital city of Yunnan Province and is located in the central part of Yunnan plateau at an altitude of 1,900 metres. It covers 14,500 square kilometre and consists of four urban districts and eight surrounding counties. It has a population of 3,626,700 people of which 2,330,000 live in urban areas.

Within the last five decades, Kunming has been transformed from a handicraft and commercial city to a metropolitan area with industry and agriculture as its backbone. With increasing development the city has seen a rise in the level of cultural, education and scientific activities. In 1993, the city's GDP was 13.88 billion yuan and it was rated 14th among all provincial capital cities in China in terms of development. It can look forward to tapping additional potential for further growth (FAOYP, 1995).

China's economic reforms

The reform of state-owned enterprises was central to the process of transformation from a socialist planned economy to a socialist market economy. Health sector reform has followed as an inevitable consequence of the wider economic reform.

The intention to undertake economic reform was officially announced at the Third Plenum of the Eleventh Central Committee meeting of the Communist Party of China, held in December 1978. The new policy adopted as its guiding theme the 'Four Modernisations' of agriculture, industry, science and technology, and defence. Child (1994, p. 38) argued that it was both an immediate reaction to the shortcomings of the Cultural Revolution and a desire to transcend the limitations of the Soviet-style centralised system developed in the first half of the 1950s and largely restored at the beginning of the 1960s. It was based on a consensus that the economic failings of the Mao period had to be rectified.

China's economic reform started with agricultural reform. Reform was based on the household responsibility system whereby land is contracted to peasants. The two principal components of China's rural reforms were the decollectivisation of Chinese agricultural production and the gradual moving of the pricing and production of agriculture commodities towards a free market (Y. Liu, Hsiao, Li, X. Liu, and Ren, 1995).

Markets had existed before 1978 but were tightly controlled with the government setting prices and production quotas. In 1990, following agricultural reform, about 80% of agricultural commodities were bought and sold in competitive markets, compared to eight percent in 1978 (Lu and Timmer, 1992). Decollectivisation

happened more rapidly. Y. Liu et al. (1995) state that by the end of 1983, the collective system of people's communes and the production teams had largely disappeared, replaced by each household farming its own leased land and retaining all the earnings.

Agriculture production responded immediately and dramatically to the reforms. From 1978 to 1984, the growth rate of Chinese agriculture in value-added terms was five times what it had been over the previous two decades. Farm income and consumption grew even more rapidly (Perkins, 1994). Thus, the reforms were very successful in stimulating agricultural production and improving efficiency (Y. Liu et al., 1995).

With regard to urban reforms, attention has focused on the reform of state-owned enterprises which form the basis of the productive forces and provide about 80% of the total financial revenue of the country. The purpose of the reform was to establish a socialist economic system that possesses vigour and vitality, and to promote the development of productive forces (Gao, 1996, p. 13).

Gao argued that the reforms have placed great emphasis on changing the relationships between state and enterprise, with the extension of the decision-making power of the management of the state-owned enterprises. This increases the responsibility of the enterprise. There has been a recognition of the economic benefits of their increasing independence, promoting the further development of enterprises toward self-management, self-development and assumption of responsibility for their own profits and losses.

Decentralisation of decision-making to the enterprise

Following the transformation to socialist ownership, a centralised planning system was established in China. The World Bank (1983, p. 147) summarised the main features of this system as follows: (a) virtually exclusive public ownership of the means of production; (b) centralisation of economic decisions, with regard to both the macro- and micro-allocation of resources; (c) a strictly hierarchical planning and administrative structure, dominated by vertical (i.e. sectoral ministry) rather than horizontal linkages, with communications from above mostly in the form of commands; (d) passive role of money and limited role of prices in resource allocation; and (e) state monopoly of

foreign trade and insulation of the domestic price structure from the world market price structure.

It has been a central objective of China's economic reform program to enlarge the decision-making role of enterprise management. In 1984, the State Council promulgated the 'Provisional Regulations on Further Extending the Decision-Making Power of the State Industrial Enterprises' (Gao, 1996, p. 70). According to Gao, these stipulated clearly that the enterprises, as relatively independent commodity producers and managers, should assume greater responsibility within certain guidelines, and enjoy a number of benefits the effect of which has been to reduce their subordinate relation to government. There are ten powers granted to enterprises for their decision-making: the power to plan production; the power over the sale of products; the power to fix prices; the power to purchase materials; the right to utilise funds; the right to handle assets; the right to decide their own organisational establishment; the right to allocate wages and bonuses; the right to develop lateral economic associations; the right to control employment (Beijing Review, 1984).

The reform looked to increase managerial decision-making through the introduction of two responsibility systems: the Director Responsibility System (DRS) and the Contract Managerial Responsibility System (CMRS).

The director responsibility system

In China, basic policy is determined by the Communist Party, on the principle that the Party provides leadership for the state (the administrative organs of government), and the state manages the economy. Party leadership is exercised both centrally (through the influence of the Politburo and the Central Committee Secretariat on the State Council and its subordinate ministries and bureaux) and locally (through Party committees, and Party members at all levels of state government and in communes, factories and other institutions). Although Party members comprise only 6-7% of the adult population, they generally occupy the most responsible jobs (World Bank, 1983, p. 47).

A major principle of the enterprise reform program has been that the performance of responsibility decentralised to the enterprise level will be placed upon their directors who therefore require the authority to carry them out (Child, 1987, p. 41). Therefore a

process called the 'director responsibility system' (DRS) was introduced into enterprise management in 1984 which shifts enterprise leadership from Party committees to directors.

The official Chinese view was that in withdrawing from day-to-day management, the Party organisation in the enterprise would have more time to exercise overall supervision and to maintain an overview of the whole enterprise in the light of central policy intentions. As a result, the Party would become more authoritative within its specialised framework of responsibility (Gao, 1996, p. 77).

Child (1994, p. 67) suggests that enterprise-based Party committees exercise political and ideological leadership. This involves ensuring that directors adhere to Party and state policies and plans, and concentrate their efforts on improving the Party's work. The role of the Party committee includes ensuring implementation of the Party's policy and the successful functioning of the enterprise sector, as well as ideological education, and supporting the activities of mass organisations such as trade unions and the youth league. The role of the Party is also strengthened through the example set by Party members as role models including actions to further achieve the enterprise's economic goals. The Party committee no longer has a direct input into enterprise decision-making and instead is expected to make suggestions and express opinions on important items, such as proposals from the director on personnel matters and on enterprise strategy and development.

According to Gao Shangquan, a well-known economist and the vice chairman of the State Commission for Restructuring the Economic System (1996, p. 78), the separation of functions between management and Party reduced the latter's influence on enterprise decision-making and has resulted in considerable improvements in enterprise management. The fulfilment of targets has been achieved due to the establishment of proper systems of management and a more efficient network of economic responsibility. Child (1994, p. 83), however, has argued that the powers remaining with the Party, such as that of discipline over its members, has limited the transfer of managerial responsibility to enterprise directors under the DRS.

The contract managerial responsibility system

In order to enhance economic performance and efficient management reforms in the relationship between the state, the enterprise, and personnel, the Contract Managerial Responsibility System (CMRS) was introduced. This spread quickly in the state-owned enterprises from 1987 and by the end of 1988, 93% of enterprises were operating under this system (Gao, 1996, p. 73).

Jackson (1992, p. 109) states that under the CMRS, the degrees of responsibility and authority held by the enterprise organisation and its supervisory body are defined by contract between the government and the enterprise. This includes the manner in which enterprise profits were to be shared. The contracted period was generally between three and five years. The enterprises which were making a profit must not only guarantee to pay an agreed amount of profit to the government, but also to increase the basic profit quota every year at a rate set out in the contract. In addition, the firm would share with the government any profit earned from the sale of production in excess of the quota. The incentive was that the firm could retain more for itself when profit in excess of the basic figure was handed over to the state. However, if the firm failed to meet the quota, it had to make it up by its own means. As for the firm that was making a loss, it must reduce the annual loss to a certain amount. The government's obligation in the contract was to guarantee the firm its supplies of raw and semi-finished materials and energy at fixed prices.

As Gao explains (1996, p. 74) the CMRS has introduced competition through a system of inviting tenders for contracts and has led enterprises to engage the services of outstanding managers, in order to optimise the terms of the contract. It has instilled a greater sense of responsibility in enterprise managers. This system has also introduced an element of risk sharing. The managers and employees of the enterprises contribute a certain amount toward a contracted mortgage fund and thereby share the risk carried by the managerial contract to which they work. If an enterprise falls short of the profit stipulated in the contract, the mortgage fund will be used to make up the difference.

The official view is that the CMRS is a practical strategy in the present economic conditions for achieving enterprise reform. It adapts well to China's national

conditions and style of management, and combines responsibility, authority and benefits between the state, enterprises and personnel, and it yields favourable results of profitability (China Daily, 1988; Jackson, 1992, p. 110).

However, as Campbell (1987, p. 69) and Schermerhorn and Nyaw (1991, p. 19) argue, the conceding of power to enterprises remains subject to the traditional subordination to higher authorities and managerial autonomy and is limited by complex historical legacies of a structural and political nature. In other words, in circumstances which combine substantial market imperfections, with continuing enterprise dependence on local authorities, the decision processes of enterprises continue to accord with more traditional patterns of Chinese organisational behaviour.

Developments in personnel policy and administration

Recruitment and dismissal

Employees of state organisations are referred to as 'workers and staff' in China. In the early 1950s, the government introduced a 'fixed' employment system to state-owned enterprises and institutions. An enterprise or institution received a fixed quota of labour allocated by a local labour or personnel bureau and a worker or staff member was then permanently attached to the organisation. Under this system, work units were not allowed to discharge workers and staff, even if they had over-employment and even if particular employees were habitually absent, lazy or negligent (World Bank, 1985, p. 131).

The government tried to introduce other more flexible employment approaches in the 1950s and 1960s, such as the 'contractual labour system' and the 'two labours system' (involving the co-existence of permanent and temporary labour), but these were interrupted by the Great Leap Forward and the Cultural Revolution (Jackson, 1992).

As Child (1994, p. 163) argues the immobility of labour and low productivity remained a serious problem as the wages budget became a heavy burden for the government. Low labour productivity and a waste of human resources co-existed with shortage of qualified skilled labour. Moreover, almost all people with post-secondary

training and some skilled workers were assigned by labour and personnel bureaux, and enterprises had to accept both wanted and unwanted recruits.

In 1986 the State Council published a set of four regulations which introduced the new employment system into the state-owned enterprise management. The new regulations:

1. placed new recruits into a contract rather than the previous permanent system of employment;
1. encouraged the 'open' recruitment of new employees and the labour authorities were no longer responsible for allocating workers;
2. encouraged workers to receive training before they took up their posts;
3. accorded greater powers in labour management to enterprise directors, particularly over the hiring and dismissal of workers (Child, 1994, p. 163).

According to the contract system, when a person is being accepted both the enterprise and the employee sign a contract that sets out their responsibilities and rights, normally of four year's maximum duration. Under this system, it is possible for an enterprise to select qualified workers through examinations.

Child (1994, p. 164) and Campbell (1987, p. 60-61) have argued that in practice, however, there was only a slow growth in the numbers of contractual workers in the state-owned enterprises and the decentralisation was withheld in relation to the size of the employment establishment and the recruitment and dismissal of employees. Up to now, most labour and college graduates are still allocated by central and local labour and education bureaux. An annual labour plan, subject to approval by the planning agencies at each level, specifies the disposition of new entrants to the labour force among different organisations and enterprises. Each enterprise is obliged to employ the number of people specified in the plan. Employing organisations have little choice about whom to hire, in general they have simply had to take whomever the labour bureau sent. Once employed, it has been virtually impossible to discharge a worker, no matter how unsatisfactory his or her conduct (Warner, 1993).

The salary and bonus system

Since the founding of the new China, particularly during the Cultural Revolution great importance was put on ideology and an egalitarian wages policy. Mao and his

supporters thought that relying on ideological rewards would create better results than using material ones (Laaksonen, 1988, p. 253).

Workers and staff have been paid a basic wage according to centrally prescribed wage scales. These scales, which have remained almost unchanged since 1956, vary from place to place (as the result of early efforts to establish uniform nationwide real wages in the face of regional cost-of-living differences), among industries and occupations in the same place, and within industries according to both the size of the enterprise and the level of government that controls it. The scales for industrial workers all have eight grades with a wage range (from the highest to the lowest grade) of about three to one. There is a 16-grade scale for technicians and engineers, a 26-grade scale for government administrators, and so on, with the widest wage range of the order of 15 to 1 (World Bank, 1983, p. 60). Personnel could be promoted according to their educational level, skill, and work performance to a higher rung of the wage ladder which also corresponded to special status (or positions). Generally workers and staff are paid monthly, and their pay is fixed.

The principle of Deng Xiaoping of 'more pay for more work' changed wages policy. In order to encourage increased production and provide workers with an incentive to step up their output and to reject 'eating from a common big pot', the bonus system was introduced, and the income of Chinese workers has been made up of their basic wages plus bonuses (Gao, 1996, p. 126). The CPC Central Committee announced in 1984 that the differences between wages paid in enterprises should be increased by fully applying the principle of rewarding the hard-working and good employees and punishing the lazy and bad workers. The wage system should take into account the amount of work done as well as differences between intellectual and physical work, complicated and simple tasks, between work which requires special skills and unskilled work, and between heavy and light work (Laaksonen, 1988, p. 254).

In order to motivate state employees, the Chinese government also created different wage systems in state organisations. For example, (a) for manager supervisors, basic wage plus bonus based on responsibility and successful performance by his/her work group; (b) long service salary (floating salary) increase for these employees who have more than six years employment with one employer. This is only

applicable if employees stayed with same employer. It was designed to reduce labor mobility; (c) piece-rate system in which the wage is based directly on the result of work; and (d) time rate wages, based on hours worked plus bonuses which were divided equally amongst workers and not related to amount of work actually performed by individuals (Campbell, 1987, p. 62; Gao, 1996, p. 126; Laaksonen, 1988, p. 255).

The wages system is continuing to develop in China. Gao (1996, p. 126) argued that the adoption of these systems has helped to link wages to production and a sense of responsibility. However, many of the contradictions of the old wage system have been brought into the new systems and the irrational wage relationship between different groups and echelons remains unresolved.

The Chinese health care system and reform

In China, the medical and health services have been developed by the policies of the Communist Party, and the public health principles of the Party and state (S. Liu, Wen, and D. Liu, 1996, p. 47). Z. Chen (1984, p. 1-2) suggests that health policy is aimed at establishing an efficient health system, so organised as to cover all members of the population and make the most of the limited manpower, materials and financial resources available. Its development was closely linked with the goal of the Chinese revolution and policies for economic development. According to Chen and Liu et al., such a health system infrastructure with Chinese characteristics, is entirely unique, and best suited to the actual conditions of socialist China.

Prior to the economic reforms, the principles underpinning health care focused on serving the workers, peasants and soldiers (*gong-nong-bing*), giving priority to preventive medicine over curative medicine, fostering unity between practitioners of traditional Chinese medicine and practitioners of Western medicine, and making health work a primary focus for mass movements.

Since the early 1980s, China's health sector has undergone many changes associated with the economic reforms. These changes include: increased reliance on out-of-pocket payments by user of health services, reform of management systems and increased autonomy of health facilities, reduction of government financial support for

the recurrent costs of hospital and other health facilities, introduction of a hospital accreditation and classification program, and an increased role for private medical practice (Bloom and Guo, 1997; S. Liu et al., 1996, p. 932-933; Yang and Liu, 1989, P. 269-299). The Chinese health care industry is facing many new challenges.

Directions in health policy

In the forty-eight years since the founding of the People's Republic of China, the political environment has changed many times. Most of these changes have stemmed from implementation of economic and social policies designed to develop the socialist nature of the state during certain periods (H. Chen, 1984, p. 59).

In December 1996, the Central Committee of the Party and the State Council of China held a National Health Conference. According to Jiang Zemin (1996), the General Secretary of the Central Committee of the Party and the President of the China, this conference was the first national health conference held by the Central Committee of the Party and the State Council of China since the founding of the New China.

The objectives and guiding ideology of health care were outlined in the official document which was released following the National Health Conference:

1. The objectives of the struggle for health care are: taking Marxism-Leninism, Mao Zedong Thought and Deng Xiaoping Theory of building socialism with Chinese characteristics as guidelines; adhering to the basic guiding principles of the Party; continually deepening health reform. To the year 2000, initially establishing a health care system with Chinese characteristics which includes health services, medical insurance, health law enforcement and supervision; achieving basic primary health care for all and making further improvement in national health conditions. To 2010, establishing an improved health system to integrate with the socialist market economy and the needs of the people's health, to improve the main national health index in the economic developed areas to reach or closely reach the average level of medium developed countries and in the relative backward areas to reach the advanced level of developing countries.
2. The guiding principles of health care in the new stage are: to take the rural areas as the focal point of the health work, to give priority to preventive medicine, to lay equal stress on both traditional Chinese medicine and

Western medicine, to rely on scientific technology and education, to mobilise the whole society to participate in, to serve the health of the people and the construction of the socialist modernisation.

3. The health undertaking is a social public welfare policy which the government emphasises. The development of the health system must be coordinated with national economic and social development, and the health and physical well-being of the people must fit in with the level of national economic development. The government assumes an important responsibility in the development of health services. Government at different levels should make efforts to increase health budgets, and mobilise the whole society to raise funds for the development of health care. Individuals also need to increase investment for their own medical insurance. By the end of this century, the aim for the total health expenditure is five percent of gross domestic product.

4. Health reform and development should follow these principles:

   adhering to the aim of serving the people, properly handling the relationships between the social and economic benefits and putting the social benefit first, guarding against a tendency of seeking economic profit while ignoring social benefit;

   taking the improvement of the general level of the people's health as the central task, giving priority to developing and assuring a basic health service, meeting the varied needs of the health of the people progressively;

   the development of the health service should be based on national conditions, resources put to rational allocation, attention paid to improve quality and efficiency; emphasis put in the rural areas, preventive medicine and traditional Chinese medicine; set suitable measures to local conditions, guided according to different classifications, and narrow the gap of different regions;

   medical organisations should be run mainly by the state and collectives, supplemented by the private sector;

   expanding and opening to the world, strengthening international cooperation and exchange in the health and medical areas, striving to learn from and use advanced scientific technology and management experience from foreign counties;

   adhering to socialist material and spiritual civilisation; strengthening the construction of professional ethics in the health industry, strengthening ideological commitment and professional skills among health personnel (The Central Committee of the Party and the State Council, 1997).

Changing health administrative structures

Since the founding of the New China, the state health administrative organs have been established in accordance with administrative divisions (H. Chen, 1984, p. 60). The government at all levels have their own organisations in charge of health administration as shown in Figure 2.1.

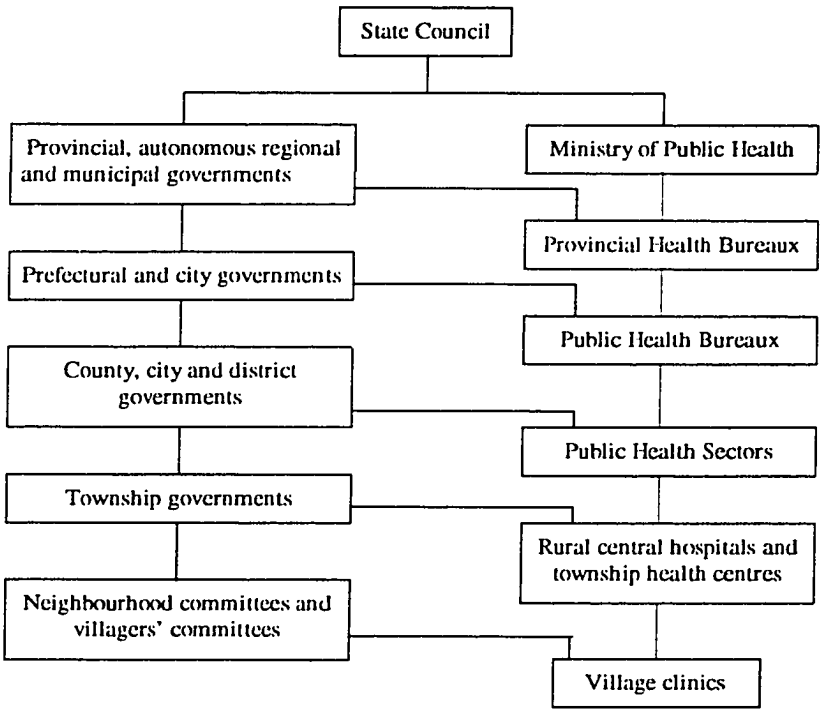

Figure 2.1 The structure of national health administration

The Ministry of Public Health (MOPH) is the central health authority which has played an important policy-making role since it was set up in 1949. The tasks and responsibilities of the Ministry change with the general tasks in the nation's development. Prior to the 1980s, the MOPH was the central planning bureaucracy and formulated policies and established targets for the health services. With the development of the market economy, the Ministry's responsibilities are changing from central control to central guidance. The basic tasks of the MOPH presently are as follows:

1. Formulating principles and policies of national health work in accordance with the requirements of the Party and state in economic and social development;
2. Sudying and making programs and strategic targets for health care development, drawing up programs and plans of action for treating and preventing diseases;
3. Making laws and regulations, technical standards and rules for health work;
4. Supervising social sanitation, labor hygiene, foodstuffs, medicines, medical biological products and materials, and medical equipment, monitoring diseases most damaging to the people's health and quality of care based on the health principles and standards, and carrying out the systems of confirmation for medical professionals' and organisations' qualifications;
5. Coordinating with the National Education Committee in working out for middle- and long-term development plans and strategies relating to secondary and higher medical education around the country, organising and administering medical universities and schools directly under its control;
6. Drawing up major research and development programs for medical sciences, organising to surmount key problems in significant medical and pharmaceutical research, and promoting health care development by using high medical technology;
7. Carrying out the principle of integration of traditional Chinese medicine and Western medicine, undertaking to carry forward and develop traditional and modern Chinese medicine and pharmacology;
8. Studying and establishing a health insurance system and organising its implementation in accordance with the division of labor with individual ministry responsibility set up by the State Council;
9. Formulating national patriotic public health principles, policies and measurements, and supervising their implementation, coordinating efforts of other departments of the State Council to bring the work of patriotic public health into line with their own work plan, organising and carrying out programs of improving sanitation of drinking water and toilets in rural areas, developing health education programs for the whole people, mobilising the whole society to participate in patriotic public health work;
10. Drawing up occupational ethics standards for medical and health professionals, strengthening legal education, accelerating socialist spiritual civilisation within health care industry;

11. Establishing and improving the health statistics system and information system around the whole country;
12. Developing and promoting academic exchanges and coordination between the government and academic organisations, conducting foreign medical assurances, participating in important health care activities organised by international organisations;
13. Organising medical professionals and techniques to rescue patients and wounded personnel under the leadership of the State Council when there are calamity and natural disasters, preventing and managing the occurrence and spread of diseases most damaging to people's health; and
14. Undertaking other matters assigned by the State Council. Administering the State Administration for Medicine and Pharmaceuticals (S. Liu et al., 1996, p. 48-49).

The government of each province, municipality and autonomous region has a Public Health Bureau. During the period of central planning, the Public Health Bureau was under the leadership of the provincial government but acknowledged the leadership of the MOPH as well. The Public Health Bureau administered health institutions in accordance with directions from both the provincial government and the MOPH. At the provincial level, the health bureau was the general representative of health care delivery. For many years, it exercised strong control over health planning, organisation and distribution in terms of the exploitation and unification of health resources, the layout of health institutions and construction, and the management of health services.

Since the 1980s, provincial and lower level governments decide on sectoral allocations (Wong, Heady and Woo, 1995). Provincial Health Bureau (PHB) enjoy greater autonomy within the health sector structure and they come directly under the authority of their local government (Bloom and Gu, 1997). The responsibilities of health bureaux have been curtailed somewhat and the balance of power and initiative has moved from the health bureaux to the health institutions. Now the main tasks of health bureau are:

1. to raise programs and plans for health work in the area directly under its control based on health guiding principles, policies, laws and regulations;

2. to implement the principle of 'prevention first', organise treatment and prevention of diseases, control diseases most damaging to the people's health in the area directly under its control, to develop maternity and child care services;
3. to administer health care organisations and personnel;
4. to develop traditional Chinese medicine, encourage integration of traditional Chinese medicine and Western medicine, conduct medical research and education; administer medicines and supervise the quality of pharmaceuticals; supervise health work for other trades; and
5. to organise and coordinate the Patriotic Public Health Campaigns and other hygiene activities (S. Liu et al., 1996, p. 49-50).

County and city governments generally have public health sections or bureaux which plan and supervise countywide health services. Under the county health authorities, there are rural central hospitals, each covering one or several towns. In the cities there are public health committees operated by neighbourhood committees.

Impact on health service structures

Since 1949, China has achieved remarkable health improvements for a population of more than 1.3 billion and one of the foundations of this was the three-tiered health care system. The three-tiered network for health care delivery was established in the late 1950s. Table 2.1 and Table 2.2 show the structures of the three-tiered networks in urban and rural areas respectively (Huang, 1994, p. 214-259; Shen, 1995, p. 1-69). The three-tier health network was a vertically organised network of community, district and provincial (or city) health units in the urban areas, and of village, township and county health units in the rural areas.

Level	Facilities	Functions in network	Staff
Basic	Community (street) health stations and clinics	Primary health care services, family planning, health education, prevention of common diseases	Doctors with three to four years of medical training after junior school
Secondary	District hospital, district centre for disease control, district health centre for women and children	Link between city and community (street) facilities -- referral of patients to tertiary level, training of health care workers at community (street) facilities and professional supervision of these workers	Facilities supervised by a doctor with at least three years of medical education after senior high school
Tertiary	City central hospital, municipal centre for disease control, municipal health centre for women and children.	Professional supervision, training base for health workers	Doctors with at least four to five years of medical training after senior high school, specialists, nurses and technicians

Table 2.1 Three-tiered network of urban health care delivery system (Zhang, Liu, and Li, 1996)

Level	Facilities	Functions in network	Staff
Basic	Village clinics	Primary health care services, prevention of common diseases, family planning, health education	Village doctors who train three to six months after junior high school and get two to three weeks' continuing education per year
Secondary	Township hospitals or health centre	Link between county and village health facilities, training base for village doctors	Facilities supervised by a doctor with at least three years of medical education after senior high school
Tertiary	County hospital, county centre for disease control, county health centre for women and children	Supervision of facilities at secondary and basic levels, and training base for health workers	Doctors with at least four to five years of medical training after senior high school, specialists, nurses and technicians

Table 2.2 Three-tiered network of rural health care delivery system (Zhang et al., 1996)

In China, 80% of the total population live in the rural areas. By the late 1970s, the Chinese government was putting a strong emphasis in medical and health work on rural areas. At the county level there were county hospitals the principal task of which was to provide medical services to the peasants. They also undertook to direct technical work in township hospitals and village clinics and conduct teaching and

research. Below the county levels, most of the rural areas had a highly structured health service. Townships had hospitals or health centres that provided referral services and supervised the barefoot doctors[1]. In each village, a subdivision of a town, had a cooperative medical or health station staffed by barefoot doctors who provide basic curative and preventive services and the villagers' committee had a public health subcommittee. As Bloom and Gu (1997) pointed out an effective referral mechanism was built into the system, and almost the entire rural population had access to essential health services at a reasonable cost.

Following the agricultural reforms and the health sector reforms in the early 1980s, however, the health care organisations at village, township and county levels became independent institutions. Increasingly, they competed for patients in order to increase revenues. The inter-connection and cooperation among different rural health facilities has been weakened or lost. The township hospitals have only limited care and intervention capability (World Bank, 1992, p. 73) (detail is introduced below). At the village level, many barefoot doctors left the health profession with the introduction of the household production responsibility system. Many of them left the health sector for full-time farming and some of them converted their health posts into private practices on a fee-for-service base (Gu et al., 1993; Hsiao, 1984). As a result, the rural three tier medical system has disintegrated (Y. Liu, et al., 1995). (The three-tier health network in the urban areas is discussed below.)

Health care systems in Yunnan Province

Since the founding of the new China, profound changes have taken place in public health in Yunnan Province. Throughout the province, there are hospitals, epidemic prevention stations and health centres for women and children. In most counties, there are medicine inspection agencies, hospitals of traditional Chinese medicine and special prophylaxis and treatment centres. In 1995, there were 6,395 health care organisations, 95,948 hospital beds and 139,489 medical and health

1. Barefoot doctors were peasants who were given a short training course and then returned to their village. They led preventive programs and public health campaigns and provided basic curative care. They worked part-time in health work and the rest of the time in agricultural production and were paid a share of collective production like all commune members (Bloom and Gu, 1997). After the Cultural Revolution, the term of 'barefoot doctor' was replaced by the term of 'rural doctor'.

workers. For every 1,000 people there were 2.10 hospital beds, 2.82 professional medical and technical workers, 1.44 doctors and 0.81 nurses. There were 17,796 clinics in 13,453 villages around the province and the coverage rate was 98.9% (Yang, 1997a; 1997b).

On the other hand, since Yunnan Province is comparatively backward in its social-economy and culture development, health services are in a backward state, especially in the border minority regions. In the Provincial Health Conference 1996, Zhao Shuming, the Deputy Governor of Yunnan Province (1996) pointed out that almost all of the health indicators of Yunnan were significantly lower than the average level of the country. For example, the average life expectancy was 3.6 years lower, and the infant mortality and maternal mortality rates were higher than the national levels.

The government's share of provincial health expenditure in Yunnan was only 41 million yuan and it occupied 3.22% of the total provincial financial expenditure in 1995. The average recurrent health expenditure per person was only 18 yuan in 1994 (the figure was 142 yuan/year for China as a whole). Although the government has been providing state employees with free health care as part of its welfare system, in the rural areas only 1.5% of the population enjoy cooperative health insurance (the national average figure was 10%) (Yang, 1997a).

Yang Cisheng, the Director of the PHB of Yunnan reported that by the end 1995, the population in deep poverty in the rural areas of Yunnan was five million. The problems of illness-induced-poverty and poverty-induced-illness are significant. Some surveys carried out in three counties of Yunnan showed that among the poor families, the rates of illness-induced-poverty and poverty-induced-illness in these counties were 50%, 67% and 80% respectively. Many health facilities in poor areas have spent very little on maintenance of basic equipment and training for health workers. Sixty percent of the township medical centres run at a deficit their expenses and only 30% could maintain their survival (Yang, 1997a).

Impact of health system reform on hospital management in China

The hospital administrative structure

All workplaces in urban areas (factories, schools, hospitals, government offices) are organised into administrative units. As Henderson and Cohen (1984, p. 5) have described, each work unit was placed under the jurisdiction of its appropriate occupational bureaucracy, a hospital under the MOPH, a university under the Education Commission. Units also come under the authority of other administrative bodies concerned with the allocation of personnel and finance, the provision of services, and the maintenance of public security.

Figure 2.2 is a simplified diagram of the relationships between hospitals and their various higher authorities[2]. The provinces have commissions and ministry branch offices, called provincial commissions or bureaux, corresponding to those at the national level. The provincial bureau of public health supervises city and prefecture health bureaux which control hospitals at the city and prefecture level, and supervises provincial and university hospitals.

As Figure 2.2 illustrates, a specific form of relationships affecting teaching hospitals involves their supervision by two higher authorities - the provincial bureau of public health and the medical university. In the other words, teaching hospitals are directly led by medical universities, which are in turn, under the authority of public health bureaux of the province.

The teaching hospitals and medical universities maintain separate administrations, and both are dependent upon provincial bureaux or commissions for major personnel and financial management decisions, including recruitment, staff salaries, and budgets. Prior to the economic reforms most services provided were financed by the relevant government authority. Day-to-day affairs in the hospitals were conducted independently, but any important policy or administrative decisions (such as managers' appointments) were under the control of the medical university leadership.

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2. The term of higher authorities (*shanji denwei*) means the combined direction and control which is part of the Chinese bureaucratic hierarchy.

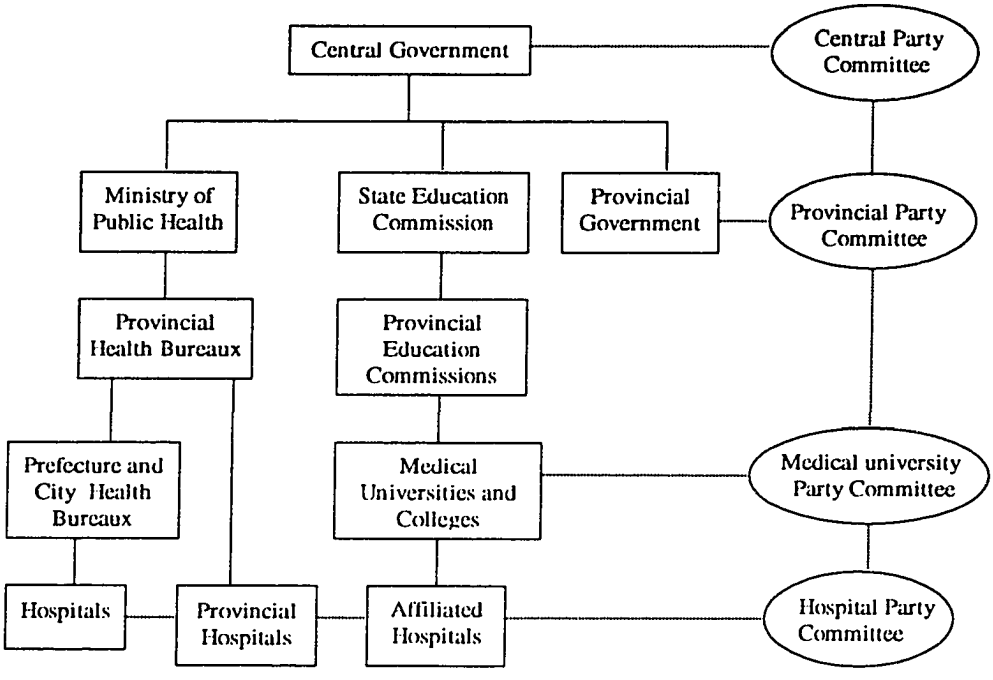

Figure 2.2 Relationship between national medical administrative organs and hospitals

The 'administration' and 'Party' authority co-exist within the Chinese health system. Organisations of the Chinese Communist Party operate from the Central Committee down to the provinces, autonomous regions, municipalities and work units. The Communist Party and its organisations at medical universities and hospitals direct the implementation of all political and economic policies and make decisions about a wide range of local issues from personnel appointments to financial decisions.

After the founding of New China, a medical service network covering the urban and rural areas was established, changing poor medical conditions in the countryside and rationalising the distribution of urban medical institutions for the convenience of urban residents. By 1994, there were 191,742 health and medical organisations in China, the number of hospitals was 67,857, including 14,762 hospitals above the county level. There were 10,556 general hospitals, 1,711 special hospitals and 207 university affiliated hospitals. The number of hospital beds were 2,802,400. The average number of hospital beds per 1000 people were 2.4 in 1995, it was 3.6 in urban

area and 1.6 in rural area (S. Liu et al., 1996, p. 600, 608; MOPH and State Planning Commission (MOPH and SPC), 1995).

China has 5,300,000 medical professionals and health workers. For every 1,000 people, the average number of medical and technical workers was 3.58, with 5.46 in urban area and 2.30 in rural area. The number of doctors was 1.60 (among this the number of traditional Chinese doctors was 0.23), 2.43 in urban and 1.05 in rural areas. The number of nurses was 0.93, with 1.61 and 0.47 in urban and rural areas respectively there were over 1,200,000 rural doctors and health aides and 400,000 rural birth attendants (MOPH and SPC, 1995).

Prior to the economic reforms, hospital organisation and establishment were under a centralised planning system. Private practice was not allowed and public hospitals were the only institutions that existed in the health system. Since the 1980s, efforts have been made to consolidate the public hospitals and to encourage the development of cooperative medical organisations and the establishment of private hospitals and clinics. As a consequence the health system now comprises a combination of state, cooperative and private sectors.

At present, municipal hospitals are all state undertakings. Some of the district hospitals and most neighbourhood hospitals or clinics are collective undertakings. There are also private practitioners, wholly foreign-owned hospitals, joint-venture hospitals and shared hospitals.

Leadership and management in Chinese hospitals

The leadership and management system operating in Chinese hospitals has changed over time. In the early 1950s, China was largely influenced by the Soviet system and practised the 'system of one-man leadership' in hospital administration. During the late 1950s and the early 1960s, it implemented the system of 'president responsibility under the leadership of the Party Committee'. During the Cultural Revolution, the hospital was led by a 'Revolutionary Committee' of the usual three-in-

one combination: members of the People's Liberation Army, cadres[3], and the 'mass' in this instance, doctors.

After the Third Plenum of the 11th Central Committee of the Chinese Communist Party (1978), the hospital carried out the system of 'president's division of labor with individual responsibility under the leadership of the Party Committee' which meant that hospital's major decisions were made by the Party Committee and then implemented by the president.

Following the implementation of the 'director responsibility system' in state-owned enterprises in 1983, the MOPH conducted a pilot study of 'president responsibility system' in Beijing and some other cities, and then worked out the proposed regulation of 'president responsibility system'. The president responsibility system provides for the president of the hospital to assume full responsibility for all matters concerning the administration and direction of the hospitals (personnel, production control, financial, etc). It changes the respective roles of management and Party in the leadership of the hospital. The Party committee plays a supervisory role only and no longer serves as the leading organ of the hospital.

In 1990, however, the Central Government issued an official document and formulated the leadership system of higher educational institutions as 'president responsibility system under the leadership of Party Committee'. Consequently, the leadership system of university hospitals was also changed to match the system prevailing in medical universities. At present a two leadership system co-exists: the 'president responsibility system' and the 'system of president responsibility under the leadership of the Party Committee' (S. Liu et al., 1996, p. 621).

Hospital internal administrative system

Generally, hospitals institute a two-tier administrative system - the hospital and medical department and administrative division. The hospital administration division is headed by the president and three to four vice-presidents head the administrative

3. 'Cadres' is a word used to denote 'anyone in a responsible position in any organisation of government, Party, industry, agriculture, military, or cultural life; a key word in Chinese Communist terminology, cadre also implies ideal leadership and loyalty,' but not necessarily membership of the Chinese Communist Party (V. Sidel and R. Sidel, 1974, P. 33).

divisions that conduct the business of running the hospital: medical affairs, medical education and research, nursing, and administration.

There are two to three top leaders in general hospitals with less than 200 beds. These include president, vice-president and Party secretary. There are additional top staff in hospitals with more beds: 3-4 for those with 300 to 400 beds, 4-5 for those with 500 to 700 beds and 5-6 for those with more than 800 beds.

Hospital administrative divisions are the intermediary units between presidential level and clinical departments. The function and responsibility of the administrative division are: to collect data and provide accurate information to aid decision-making of the presidents; to gather opinions from different sources and document them according to the requirement of the presidents in order to make business plans and to formulate rules and regulations; to supervise and implement hospital plans; to allocate hospital resources in accordance with the aim of maximising efficiency; to investigate and study, and assist presidential leaders in solving problems when they arise. Administrative divisions are expected to service the presidential leaders, the clinical front line and the staff members.

The number of administrative personnel as a proportion of total authorised personnel in a hospital is expected to be around 8-10%. In each division there are generally a chief and a deputy chief looking after day-to-day work. In accordance with the principle of simplifying the administrative structure, the administrative division is expected to be staffed with a small number of capable personnel, and the number of staff is changed in different divisions depending on their functions and responsibilities (S. Liu et al., 1996, p. 620).

The clinical and diagnostic departments are the major sections providing medical services. Generally speaking there is a head and an assistant head in each department and the head of department is a medical practitioner with a relative higher professional skill in that specific field as well as a manager. He/she is in charge of both the medical professional work and general administrative matters within the department. This includes providing medical care, teaching and research, improving the quality of care, enhancing medical staff development, strengthening medical ethics education,

considering social and economic benefits, and coordinating relationships with supervisors, subordinates, and other departments.

Hospitals with more than 300 beds practise a three-tier nursing administrative system which includes the director of the nursing department, the head of the nursing division and the head nurse of the department. Hospitals with less than 300 beds practise a two-tier nursing administrative system which has the general head nurse and head nurse of the department. These nursing managers are in charge of the whole nursing work under the leadership of the president. All the matters relating to nursing establishment, nurse transfer within the hospital, assessment of nursing professional skills, nurse promotion and reward, and ideological and political education for nurses are under the control of these nursing managers. The head nurse of the department works with the head of department in managing the professional work and general administrative matters in a clinical or diagnostic department (Qian, 1996, p. 84).

The role of the Party organisation

The hospital Party committee headed by the Party secretary is a leading organ standing side by side with the hospital administration at the presidential level. Since the 1980s, the formal role of the hospital Party committee has changed and is confined to a 'guaranteeing and supervising' role (*baozheng he jiandu*). This means that it makes sure that the hospital adheres to the Party and state policies and plans, it supports the activities of mass organisations such as the trade union and youth league, and it fosters political and ideological education. It also strengthens the role of the Party through the example set by Party members as role models. The Party committee is expected to make suggestions and express opinions on important items such as proposals from the president on personnel matters and on hospital strategy and development.

Under the Party committee there are some Party and mass organisations including the office of the Party committee, the division of organisation (in charge of the selection of middle level managers and building Party organisation), the division of propaganda (publicising the Party's general and specific policies), trade union, youth league and several Party branch organisations (in which the Party members are grouped from various departments and administrative organs).

The contract managerial responsibility system

In 1984 the MOPH launched health care reform in all hospitals above the county level. The government decided to grant greater autonomy to hospitals in the expectation that it may reduce the financial burden of hospitals on the government and strengthen the efficiency and effectiveness of hospitals. The Contract Managerial Responsibility System (CMRS) was one of the major initiatives in these reforms. Since 1987 most hospitals in the country have extended the implementation of the CMRS throughout their whole organisation (Yang and Liu, 1989).

The CMRS is similar to the DRS in industry involving the decentralisation of responsibility for the operation and performance of a hospital from the PHB or other responsible government authorities to the hospital president. It means that internal executive authority is now in the hands of the president, subject to monitoring by the hospital's Party committee and staff congress.

The CMRS also provides for the decentralisation of responsibility from the hospital to the department, subject to agreement upon plans and attaining agreed targets. Each department head has to sign a 'management responsibility contract' with the president each year, including management targets in the areas of patient care, and teaching and research. Medical staff and all other employees within the department also have economic targets set. An individual is accountable to the department head. Financial incentives including bonus payments can be paid directly to department heads, but payments are also made to the department as a whole, tied to the achievement of assigned targets, for distribution as salary bonuses to individual staff members. If people or departments fail the targets set, fines are imposed.

It is reported that the reforms have led to higher volumes of activity in hospitals and increasing staff productivity. The number of patients treated has increased and the hospitals' revenues have increased every year (Chai and Liu, 1989; Official Investigatory Group, 1990; Research group of MOPH, 1990; Xu and Lin, 1995; Zheng and Hillier, 1995).

Hospital personnel policy and administration

Hospital personnel are categorised into three broad occupational groups: cadres, technicians and workers. These general categories cover a variety of occupations, each with its own ranking system and wage scale. The physicians, the nurses and the entire range of administrators from the president to the secretaries and assistants are called cadres. The second category includes the rather small number of medical technicians working in the laboratories. The third category, workers, encompasses a variety of skilled and unskilled occupations, including cooks, electricians, health aides, plumbers, carpenters, mechanics, laundry people, night watchmen, construction workers, and general unskilled workers doing manual labor (Henderson and Cohen, 1984, p. 32).

Hospitals have a fixed employment system which includes a fixed quota for staff establishment, hiring and firing authorised by the local personnel bureau and the health bureau, and wages set by the state. Every year, in addition to accepting the college and university graduates, hospitals are required to take personnel from other organisations and retired soldiers. Hospitals are responsible for the whole life of their employees; not only paying their salaries, but also providing accommodation, social welfare and medical care.

The MOPH issued a standard staff number relative to the authorised number of beds in a hospital. The ratio of hospital beds to the number of working personnel is 1:1.3 to 1:1.4 for general hospitals with less than 300 beds, 1:1.4 to 1:1.5 for those with 300 to 450 beds, and 1:1.6 to 1:1.7 for those with more than 450 beds. The ratio of bed to doctor is about 1:1.3 and bed to nurse is about 1:0.6. Additional staff numbers of 12% to 15% can be added for university affiliated hospitals and teaching hospitals (Guo, 1984. p. 116; S. Liu et al., 1996. p. 631).

According to the MOPH, the proportion of different types of personnel in general hospitals are: professional staff between 70-72% of the total, administrative and service (supply) staff between 28-30% of the total, with the latter accounting for 20% of the professional staff, 25% are physicians of modern medicine and traditional medicine, 50% nurses, eight percent pharmacists, 4.6% laboratory technicians, 4.4% radiologists and technicians and eight percent other technical personnel (S. Liu et al., 1996, p. 631).

The standard average workload of physicians and nurses in general hospitals are set by the MOPH as follows: a physician sees five patients per hour in an outpatient department (four patients per hour for university affiliated hospitals); a resident-doctor is in charge of 10-20 beds (the ratio of resident-doctors to beds is 1:10-15 in department of infectious disease and paediatrics, and in other departments are 1:15-20); and the average number of beds looked after by a resident-doctor is 8-12 for university affiliated hospitals. The ratio of the nurses to doctors is 1:2 in outpatient departments and the ratio of nurses to hospital beds is 1-1.2:100 (Qian, 1996, p. 172-175).

In China, health worker salaries and differentials did not change greatly in real terms from the 1950s until the end of the Cultural Revolution. With the economic reforms, real health sector salaries increased gradually in line with salaries generally, although in recent years they have somewhat fallen behind those in rapidly growing sectors like industry, construction and commerce (State Statistical Bureau, 1988; World Bank, 1992, p. 100).

As a part of the reform of the personnel system, the government health worker's pay is now made up of three main elements. Firstly, the basic salary, which makes up on average about 60% of their full regular payment, and depends on professional category, qualifications, administrative position and years of service. Secondly, there are subsidies of various kinds (for example, for food, reading materials, hygiene, health hazards, transport, years of service for nurses) which are fixed amounts payable to all eligible employees and so they reduce the overall salary differentials. They constitute on average about 25% of regular salary payments. Finally, bonuses are paid out of institutional earnings, more or less in proportion to basic salaries (Tang et al., 1994, p. 55).

One of the ways in which the Chinese have been able to provide low-cost public and community health services is by successfully controlling the individual incomes of the 30% of the population not engaged in agriculture including health care (Lardy, 1978). Since health care is labour intensive, health services can be kept within reach of poorer communities if the incomes of the health professions are limited (Blendon, 1979). According to Brand (Personal Communication, 1998) salaries are responsible

for only 10% of the total hospital bill at some large teaching hospitals in Jingsu Province.

Hospital accreditation program

Under the three-tier system of medical services, hospitals in the urban areas were categorised into the municipal (provincial), district (prefecture and city) and neighbourhood (county), each being assigned a defined service area where it carried out treatment, prevention and health care. Hospitals at the municipal level were responsible for providing guidance to district hospitals, which, in turn, had the obligation of giving direction to neighbourhood hospitals. Patients were require to see doctors at the hospitals nearest their homes. Difficult or critical cases might be handled by arranging group consultations with the participation of doctors at the next level or might be referred to hospitals at the next level (Z. Chen, 1984, p. 99-100).

As a part of the health system reforms, the MOPH carried out a hospital accreditation program for general hospitals in the urban areas and the official documents 'Measures of Hospital Stratified Management' and 'Accreditation Standard for Hospital' were promulgated in 1989. S. Liu et al. (1996, p. 660-665) explained that the purposes of this program were: to build the health service system according to the regional health program; to consolidate the three-tiered network of health care system and effectively meet the needs of health and medical service of the people within the regions; to make full use of the limited health resources; to direct hospitals at different levels and manage hospitals by standardisation and programming by the government; and to let leadership of hospitals understand their own positions clearly and manage their hospitals in accordance with their tasks and scopes. As S. Liu and his colleagues (p. 609) pointed out

> The program of hospital accreditation was expected to resolve a number of problems. For example, overload in some hospitals and underload in others (hospitals at the basic level in particular), poor efficiency in hospital management, including excessive length of stay, low utilisation ratio of medical equipment, price of medical services having no relation to cost, and the coexistence of both shortages and waste in medical resources.

The standards of hospital accreditation

General hospitals were classified into three levels in accordance with their tasks and functions, as well as the relationship between hospitals and communities:

- hospitals at the first level: carry out preventive programs; provide primary medical service to a community with a population about 100,000; include the neighbourhood hospitals in urban and the town hospitals in rural areas with 20 to 99 beds.
- hospitals at the secondary level: provide comprehensive medical service for several communities and undertake some teaching and research, include city, district and county hospitals with 100 to 499 beds;
- hospitals at the third level (tertiary hospitals): provide medical services with higher techniques and special treatment for people living in several regions and undertake higher medical education and medical research; include provincial hospitals, university affiliated hospitals and city central hospitals with more than 500 beds.

The hospitals were then divided into A, B and C at each level in accordance with their scope, tasks and functions, management and administration, quality of care, ideological and political work, medical ethics of staff members, security and amenities.

The Accreditation Standard for Hospitals includes three parts: basic standard, appraisal standard and standard of judgement. All hospitals are required to follow and achieve the basic standard regardless of the hospital size and professional level. It has seven items: number of beds, establishment of departments, disposition of personnel, construction of buildings, installation of equipment, administrative regulations, operating rules of medical treatment and nursing, and registered capital (see Table 2.3).

Items	First Level	Secondary Level	Third Level
Number of beds	20 - 99	100 - 499	> 500
Establishment of department			
clinical department	> 5	> 8	> 13
diagnostical department	> 4	> 8	> 11
Personnel[4]			
bed : medical & technical staff	1 : 0.7	1 : 0.88	1 : 1.03
bed : nurses	no requirement	1 : 0.4	1 : 0.4
professional titles	> 3 doctors (1 doctor-in-charge) > 5 nurses	> 3 A/director-doctors, > 1 doctor-in-charge per department	head of department is A/director-doctor > 2 dietitians
engineers and technicians	no requirement	no requirement	1% of total medical & technical staff
Construction of buildings (m^2)			
build-up area/bed	> 45	> 45	> 60
net use area/bed	no requirement	> 5	> 6
build-up area/number of outpatient per day	no requirement	> 3	> 4
Equipment			
basic equipment	10	44	70
unit facilities of per bed	13	13 & bed signal light	13 & bed signal light
other equipment	no requirement	fit requirement of diagnosis and treatment	fit requirement of diagnosis and treatment
Regulations and rules	binding into book form and used in practice		
Registered capital	formulated by the health bureaux of provinces, autonomous regions and centrally-controlled cities		

Table 2.3 The basic standard for hospitals at different levels (S. Liu et al., 1996, p. 668)

Appraisal standards are set in accordance with the functions, tasks and scope of hospitals at different levels. Generally they include the following:

1. Hospital functions and tasks: The hospitals must undertake medical care, disease prevention and health promotion and rehabilitation, and provide patient care, teaching and research (hospitals at the three levels take different

4. The ratios of bed to personnel were slightly different with the ratios presented on page 35 which were also given by S. Liu et al (1996). According to S. Liu et al, all the data included in this table were from an appendix document of Rules and Regulations of Medical Institution issued by the MOPH.

responsibilities for these functions and tasks in accordance with their own positions);

2. Number and type of departments: They are depend on the size of the hospitals, incidence of diseases in the locality and manpower as well as the development of medicine. Hospitals at the secondary and tertiary levels are required to set up more specialised departments;
3. Personnel structure (see Table 2.3);
4. Administrative system: The establishment of administrative divisions must be according to the principle of simplifying the structure, staffed with capable and vigorous personnel through small in number, and efficient;
5. Quality management and professional levels: All hospitals are required to set up a quality management department for controlling and monitoring quality of care, to strengthen nursing management, to tighten up the training in relation to basic theory, knowledge and skills, to put into effect in control of hospital acquired infection, to strengthen blood transfusion management;
6. Management of teaching and research: All modern hospitals should conduct teaching and medical research based on their own functions and tasks.
7. Ideological and political work and medical ethics education: Efforts are encouraged to improve medical ethics of staff members and it would be one of focal points of the accreditation;
8. Statistical indicators: They are related to the clinical process of care and outcomes (S. Liu et al., 1996, p. 668-669).

Standards of judgement are assessed out of a score of 1000. According to the appraisal standards, hospitals are assessed around the aspects of department establishment, personnel disposition, administrative and management standard, professional levels, working quality, technical facilities, etc. Hospitals which gain a score of comprehensive assessment higher than 900 will be marked A, 750 - 899 will be B, lower than 749 will be C and hospitals which only reach the basic standards will be marked D (S. Liu et al., 1996, p. 670).

The process of hospital accreditation

Hospital accreditation is a government responsibility and its assessment is organised by the government. A 'hospital accreditation committee' which has representation from government authorities and professional organisations is set up in

public health bureaux at different administrative levels (the central, provincial, city and county). The Hospital Accreditation Committee of the MOPH is in charge of setting the accreditation standards and the enforcement plan (S. Liu et al., 1996, p. 672). The hospital accreditation committee at the provincial level is responsible for the assessment of tertiary hospitals, committees at the city and county levels are responsible for the assessment of hospitals at the levels directly under their control.

Accreditation is carried out every three years. A hospital has to apply to the committee for its assessment when it decides it is ready for the survey under the basic standards and the appraisal standards. The committee then conducts a comprehensive accreditation investigation in the hospital site and also inspects the hospital in irregular intervals in accordance with the set standards (each item of these standards has its own scores set by the committee). The process of accreditation covers a wide range including hearing reports, discussing with managers, on-the-spot investigation, checking patient records and documents, examining theory and technical operations of professionals, talking with patients and their families, and assessing technical programs. Scores of the assessment are calculated up to a total score of 1000, based on a complicated mathematical formula (S. Liu et al., 1996, p. 674).

In general, a survey in each hospital site takes 2-4 days to conduct. Irregular hospital inspections are conducted randomly within the same accreditation period and the result occupies 15% of the total score of the next accreditation period. The committee presents an assessment report to the public health bureau for approval.

Health financing and insurance programs in China

The financing and cost of health services

The total recurrent expenditure in the Chinese health sector increased dramatically between 1965 and 1988. Tang et al. (1994, p. 36) reported that recurrent health expenditure, at constant 1980 prices, rose from 4.7 yuan per person in 1965 and to 26.3 yuan in 1988. After the economic reforms, expenditure has been growing in real terms at an average annual rate of 13% between 1980 and 1988 (7.8% between 1965 and 1980). Total health expenditure, comprising both recurrent and capital costs,

rose from 2.1% of gross domestic product (GDP) in 1965 to 2.6% in 1980 and 3.2% in 1988. Peng (1997) reported that in 1994, the recurrent health expenditure rose to 142 yuan per person and the total health expenditure to 3.8% of GDP.

There have been four major financing mechanisms in the health sector of China: government health budgets, schemes arising from wage employment, rural cooperative health financing schemes and other means by which the collective economy has supported local health care, and direct user payments (Tang et al., 1994, p. 36-37). Their relative importance has changed over time in a large degree due to the economic reforms.

According to Tang et al. (1994) government recurrent health budgetary expenditure remained at three percent of total government recurrent expenditure during most of the period between 1965 and 1988. Since the 1980s, as a proportion of total recurrent health expenditure, the contribution of government health budgets declined from 28% at the beginning of the decade to about 18% in 1988.

Under the planned economy, the budgets of one level of the health system were approved by the health authority of the level above and the provincial health budgets were approved by the MOPH. Fiscal decentralisation was introduced at the beginning of the 1980s and the authority to decide on sectoral allocations was delegated to provincial and lower level governments. These governments now account for over half of the total public sector budget (World Bank, 1989). As Tang et al. (1994, P. 38) describe the higher levels of the health service remain technically in a supervisory relationship with the levels below. Local government budgets are sent for approval to the higher levels of government and the health components are commented on by the health authorities at the higher levels. PHB keep consolidated accounts of the recurrent and capital health expenditures in their provinces and report the expenditure data to the MOPH. Hence the Ministry's published health budgets remains national in scope and still include the health budgetary expenditures of provincial and local governments.

From 1950 to the early 1980s, the main sources of hospital revenue were: from user charges and government funds. Hospital revenue included outpatient consultations, tests, operations, bed day charges and revenue from the sale of

medicines. Hospitals could only mark the price of medicine by up to 15% of wholesale prices and other fees charged were all lower than the cost in accordance with the standards set by the government. The balance was made up by the government grant. The government also took the responsibility for investing in large-scale equipment.

With the economic reforms, government health budgetary allocations are only used to fill in the gap between hospitals' essential expenditure and the finance they raise. Facilities especially city and county hospitals, are required to generate as much revenue as possible by charging fees for their services. Hospitals are expected to cover 85% or more of their costs from patient revenue. Most manage to balance revenues and expenditures (World Bank, 1997).

The health expenditure financed from wage employment includes government, state and collective labour enterprise insurance schemes. The government employee insurance scheme is financed independently of government health budgets through appropriations from the Ministry of Finance. Benefits are paid out of the central government budget for national level employees and out of local budgets for employees at lower levels. The real costs of government insurance increased by an average of 14.7% per year between 1980 and 1988 and with an annual increase in real expenditure per enrolled member of as much as nine percent (Tang et al., 1994, p. 42).

The costs of the state labour insurance scheme are paid from the 'welfare fund for enterprise employees', which is deducted from the enterprise's pre-tax profits. About two-thirds of insurance payments are made to enterprise health facilities and a third to designated government facilities. The cost of this scheme has risen from about five percent of the total wage bill of state enterprises in 1980 to about eight percent in 1988 (World Bank, 1992, p. 119).

The most dramatic change in health financing was the decline of the rural cooperative medical system since the economic reforms. The share of spending contributed by this scheme fell from 22% in 1978 to 2% by 1993 and it was due mainly to the collapse of the cooperative health care (World Bank, 1997) (The issue of cooperative health care is discussed in more detail in the section of health insurance below).

According to the World Bank, out-of-pocket payments rose from 20% of health sector revenue in 1978 to 26% in 1986 to 42% in 1993. The vast majority of those who pay for health care are rural and they are concentrated disproportionately in the poorer regions, which lack cooperative health care financing. On the other hand, since the economic reforms, growing numbers of urban residents are working in the informal sector or in small private enterprises, or are seeking employment, and they have to bear the cost of medical care themselves. That means that some two-third of the population have to pay all health service fees entirely out-of-pocket (Tang et al., 1994, p. 50).

There are considerable regional differences in per capita health expenditure in China. Tang et al. (1994, p. 40) commented that government expenditure per person tends to be higher in higher income, more urbanised provinces and counties, and total health expenditure per person is much higher in urban than in rural areas. This is mainly because of the urban concentration both of government hospitals, which receive relatively high budgetary support, and of the beneficiaries of the public service medical scheme and labour insurance; in fact most urban residents benefit from a work-related health scheme of one kind or another. In 1988, when the average recurrent health expenditure per person in China was about 33 yuan, health expenditure on beneficiaries of the public service medical scheme amounted to some 117 yuan per enrolled member and that on beneficiaries of state labour insurance was an estimated 133 yuan per enrolled member. In 1981, when the ratio of these per capita costs was similar, the total recurrent health expenditure per urban person was more than three times greater than that per rural person and this difference was mainly due to differences in public through health expenditure (Prescott and Jamison, 1984). State expenditures per capita through health budgets, the public service medical scheme and state labour insurance were nearly 10 times greater for urban than rural residents; these expenditures financed more than three-quarters of urban health expenditure but less than one-third of rural health expenditure.

Fees and prices

Medical fees and prices, with the exception of those for drugs, are set officially in each province by the PHB in consultation with the provincial price bureaux. Fee levels may vary in different parts of China.

In the 1950s, medical care fees were set at less than cost as health care was seen as a social service. Since the mid-1980s, as part of an overall reform of prices, medical care fees for standard procedures have been increased, but they are still generally considerably below actual cost. Tang et al. (1994, p. 54) commented that fees for newer procedures (such as computerised tomography, ultrasound examinations, automated laboratory tests, intensive coronary care and renal dialysis) are not affected by this historical price legacy. They are negotiated between the hospitals and the local health and price bureaux, supposedly on the basis of 'average cost', but in many cases hospitals set out to make a considerable profit. This source of revenue is available mainly to the large urban hospitals.

Drug prices are set through the Medical and Pharmaceutical Administrative Bureau, a body carrying ministerial status. Prices for many drugs, especially the older standard ones, are set nationally by the bureau at the central level, in which case the prices will be more or less uniform in the country. On the other hand, for drugs which do not appear on the national list (newer products in particular), prices are set by the local offices of the administrative bureau in the provinces. Prices of pharmaceuticals increased with the economic reforms, the price index rising from 100 in 1980 to 185 in 1989 (Yu, 1992).

The state manufacturers, organised under the State Pharmaceutical Corporation, produce almost all the western and Chinese drugs used in the country. The drugs are delivered to the health care providers through the National Drug Corporation, which manages a network of distributors. Factory prices are set by the Medical and Pharmaceutical Administrative Bureau, and each link in the chain of distributors charges a mark-up. Final wholesale prices are about 20% above ex-factory prices (Tang et al., 1994, p. 37).

Since 1985, private companies have been permitted to manufacture and distribute drugs. In addition, health facilities and retail outlets can now buy their medicines from whatever sources they wish, including from the factories directly, thus cutting out the distributors; the facilities and retailers then often share what would have been the wholesalers' mark-up with the manufacturers. The profits from drugs sales is now the major source of non-budgetary revenue of hospitals, accounting for about 60% of hospital revenue nationwide (Yu, 1992).

Tang et al. (1994, p. 53) stated that for outpatient services, patients pay fees for registration, services (e.g. injections, minor surgery), materials (e.g. bandages), tests (e.g. x-ray, laboratory, ultrasound) and drugs. For poor families paying out-of-pocket, outpatient fees can be a considerable burden and may deter them from seeking health care. Inpatient fees follow the same broad categories as for outpatient care and there is in addition a daily bed fee. Food must be brought in by the patient's relatives or bought separately from the hospital refectory. Hospitalisation costs are high in relation to average incomes in China and can constitute a financial disaster for families who are not beneficiaries of health care schemes with high rates of financial cover.

Health-insurance programs

China has neither a national health service nor a national health-insurance system (Blendon, 1979). Like many other countries, China has different types of health-insurance programs for government employees, industrial workers and agricultural labourers (Wen and Hays, 1976).

There are three schemes of health insurance programs in China: Government Employment Health Insurance (GHI), Labour Health Insurance (LHI) and Cooperative Medical Care (CMC). The GHI, financed from general revenues, was introduced in 1952. It guarantees free health services to government employees including civil servants, college teachers and students, and workers in political parties and not-for-profit organisations, and coverage continues after retirement. Tang et al., (1994, p. 42) cited that the beneficiaries are entitled to care at designated government facilities, which are paid by the scheme on a fee-for-service basis. Outpatients pay only a small registration fee and inpatients bear the cost of hospital meals. Recently in some places, in an effort to control costs, patients are required to pay the medical fees themselves and then claim the money back. In some provinces ceilings have been imposed on payments and there have been attempts to reduce drug expenditures; for example, employees may be given some money (according to their age and years of service) out of which they must pay 10-20% of outpatient drug fees; if they spend more they may claim the additional expense back at the end of the year, but if they spend less they can keep the money themselves, creating an incentive for people to consume less drugs. In

1989, 26.5 million people, 2.4% of the population, were covered by the GHI (Song, 1991; Wang and Liang, 1991).

Workers employed in the enterprises are insured by the LHI, which was introduced in 1951. There are two schemes of LHI: state labour insurance and collective labour insurance. State labour insurance entitles workers in state-owned enterprises to free health care (excluding hospital meals). It mandates that the state enterprises with more than 100 employees must provide the LHI (Planning Committee of Sichuan Province, 1973) and the small state enterprises can voluntarily provide LHI for their employees (X. Liu and Hsiao, 1995). In 1987, 45.6% of urban citizens were covered by labour insurance (Huang, 1994). In an effort to control costs, many enterprises now require employees to pay the medical fees themselves and then claim reimbursement (Tang et al., 1994, p. 43). In addition, this insurance system pays half the costs of health care provided to the families of individual workers (Congress of the United States, Joint Economic Committee 1976, p. XI-XIII, 160-162, 388-540; The New China News Agency, 1978, p. 9-11, 30-32).

Expenditure on state labour insurance increased between 1980 and 1988, an average real increase of seven percent per year (World Bank, 1992, p. 119, 121). The cost explosion is a cause of considerable concern to enterprise managers and government policy makers alike. Some enterprises are unable to pay the hospitals bills of their employees (Tang et al., 1994, p. 43).

Another scheme of the LHI is called collective labour insurance. As Tang and his colleagues (1994, p. 43) state many county government enterprises or other institutions, township and village enterprises in the rural areas, and district collective enterprises in the urban areas, organise voluntary labour insurance for their employees. A modest ceiling is sometimes placed on payments and partial coverage may be offered to dependents. The collective or enterprise may pay an annual lump sum to a local health facility to obtain services at a reduced charge. In 1987, 24.2% of the population received medical services supported by collective insurance program (Huang, 1994).

In 1994, under the approval of the State Council, four ministries, (namely, the State Committee of System Reform, Ministries of Finance, Labour and Public Health) jointly formulated a document on a pilot project of medical insurance system reform for

employees, which was conducted in two cities, Zhenjiang (Jiangsu province) and Jinjiang (Jiangxi province) since October 1994 (Hu, 1996a; 1996b; Shen, 1995). Under this model, the old employee's insurance system has been transferred from the solely government or enterprise's responsibility to a combined social security and individual self-security system. The city dwellers pay a small proportion of their medical expenditure from their salaries and the remainder is paid from funds raised by the city government and other public organisations. The model is now being promoted in other cities around the country (Zhang, et al., 1996).

The third program called 'Cooperative Medical Care' insured more than 60% of the families in China in 1976 including 90% of the agricultural labourers. In contrast to the program for government workers, it was a program of self-insurance developed by the agricultural co-operatives, in which each agricultural co-operative operated as a self-sufficient unit (Wen and Hays, 1976).

Tang et al. (1994, p. 45) describe how cooperative medical care schemes derived funds from three main sources: township government extra budgetary revenue, village welfare funds, and individual households. Prior to the economic reforms, communes and brigades appropriated a proportion of the collective agricultural output and this was the main local source of funds out of which social activities (in the field of health, education and welfare) were financed. At the brigade level, the social welfare fund was an important source of funds for the cooperative medical schemes

Following the agricultural reforms in the early 1980s, most CMC schemes collapsed. The township government and village administrative committees no longer receive a share of agricultural production and they have not been able to raise sufficient taxes to replace the lost revenue. Hence the main source of township extra budgetary revenue and of income for village welfare funds is now the profits of non-agricultural enterprises at the respective level. However, there are many areas where the township governments and/or village administrative committees lack this source of income. The vast majority of the rural population in China obtained their health services on a fee for service basis rather than the previous prepaid basis. The proportion of village with CMC schemes had fallen to 4.8% by 1989 (Y. Liu et al., 1995).

The collapse of CMC has affected the access to medical care (Bloom and Gu, 1997; Gu et al., 1993; Y. Liu et al., 1995). According to Liu and his colleagues, the financial burden of illnesses for rural families rose sharply after the collapse of CMC. The relatively high costs of medical care restrained the medical service utilisation and affected the living conditions of the rural people, especially the poor. On the other hand, after the collapse of CMC, many uninsured people were exposed to the risk of catastrophic medical expenses. When an uninsured person becomes severely ill, this person must pay a large medical bill.

In the last few years, because of the reappearance of problems that had been overcome (for example, farmers being bankrupted by the cost of illness) and the resurgence of some diseases that had been eradicated or well controlled (such as tuberculosis and schistosomiasis japonica), the MOPH decided to re-establish and promote the rural cooperative medical care financing system (Zhang et al., 1996). At the end of 1995, 64.2% of village and 56.6% of the rural population in Jiangsu Province were covered by cooperative financing. It is intended that by the year 2010, 80% of the population in rural areas of China will have such health care coverage (Jiangsu Provincial Bureau of Public Health, 1996; Research Group from the State Council, 1994; Q. Liu, 1996).

Health management education in China

China's management training and development needs stem from the ambitious program of the four modernisations which the economic reform program is dedicated to achieving and a shortfall of the highly educated managerial personnel capable of managing modern enterprises (Warner, 1992). Chinese reformers have called for the training and building up of managerial and technical cadres to lead the modernisation process (The Communist Party of China (CPC), 1984).

The changes taking place in the hospital system have profound implications for the role of hospital managers. Managers' competence in routine administration is critical to achieve the necessary gains in productivity and efficiency. Leadership by senior management is increasingly important with respect to the strategic positioning and development of each hospital.

In early 1981, the MOPH held the National Health Educational Conference in Suzhou. The policy makers analysed the destruction wrought by the Cultural Revolution when formal education in health care was disrupted and pointed out that the lack of managerial competence among health administrators was one of the critical obstacles to modernisation and improvement of the health care system in China. It was argued that the need for investment in management training in health had become pressing and major efforts to commence health management education were called for (Guo and Liang, 1994; Han and Guo, 1992; Liu, 1992).

By the end of 1981 seven health management education centres had been established by the MOPH. These centres were located in Haerbin Medical University (Heilongjiang Province), Shanghai Medical University (Shanghai), Tongji Medical University (Wuhan), West China Medical University (Sichuan Province), Xian Medical University (Shangxi Province), Beijing Medical University (Beijing) and Beijing Traditional Chinese Medical College (Beijing). From 1983, some other medical universities and colleges around the country also established their own health management departments in quick succession. They all were encouraged and supported by the central and local governments (Geng, Mao, and Chen, 1989; Han and Guo, 1992; Hou and Zheng, 1991).

However, the development of health management education centres in China was unbalanced (Fang and Gao, 1995). For instance, there were four centres in Shanghai and Hubei, three in Beijing and Chendu respectively, but there was no health management training program in many other provinces, especially in Northwest and Southwest China.

The management education programs included postgraduate diploma, bachelor degree, tertiary certificate, and on-the-job training (correspondence and workshops). The tertiary certificate course which was provided on a full-time basis for three years became the principal part of health management education in China. Over 20 medical universities and colleges offered this education program around the country. The admission requirements for applicants were: having a vocational certificate and experience in health administration or health professional work for over five years, age younger than 40. Therefore the majority of the students were those who worked as administrators in various health organisations, but the remaining students were those

who graduated from high schools with the equal educational background (Fang and Gao, 1995).

Li and Qiu (1991) stated that the three-year tertiary certificate course offered at 17 health management departments of medical universities and colleges comprised four parts including general basic course, medical relevant course, basic specialised course and specialised course. Main subjects presented in these courses were English, higher mathematics, politics, Chinese, epidemiology, preventive medicine, introduction of clinical medicine, biology and ecology, health economics, computer application, statistics, basic theory of management, health law, operational research, social medicine, psychology, sociology and ethics, health management in other countries, hospital management, health financial management, public relations, health administration.

However, these educational courses declined from 1986 and reached their lowest ebb in 1990 (Han and Guo, 1992; Han and Chen, 1992). There were major weaknesses in the programs. Firstly, admission requirements were such that 45% of the administrators who were over 40 years old lost the opportunity to participate in the training courses, while a number of high school graduates who had no managerial experience or personal potential to work in managerial positions were selected. Secondly, most hospital managers were doctors and they had to do clinical work at the same time as they managed. They therefore had no time for off-the-job training in management field. Finally, there was a contradiction between training and use and promotion of managers, most health organisations had no experience of personnel planning. Many managers completed their training courses, but on returning to their employers they found themselves slotted into their old jobs, or used as before, as though nothing had happened. There was no appreciation that the graduates had acquired management knowledge and skills which could be put to good use. As a consequence, the number of managers who participated in management educational courses reduced every year (Geng et al., 1989; Han and Chen, 1992; Li and Qiu, 1991).

Also many health management training centres offered short-time and/or correspondence training programs in the field of health administration. These programs focused on broad management areas and there were no courses focused on

some particular areas of management knowledge and skill development which were relevant to participants' careers and to apply in their work place. The teaching methods of these courses were generally structured into three sections: lectures, group working and visits to health organisations. However, strong emphasis was placed on management theory learning, and an overload of lectures reduced the time available for group work and visits had to be reduced or cancelled. In most courses lectures occupied all teaching time. It is also stated that there was also inadequate provision of teaching materials suitable for managers' practice in the Chinese health care system, a lack of case studies in particular (Yuan and Dai, 1986).

In July 1990, the MOPH held a Health Management Education Workshop in Anhui. It was recognised that most of the health administrative staff members had received very little formal management training. Therefore they had little knowledge and few skills in health administration. Their experience was confined to the traditional patterns of management and therefore failed to meet the demand of their present jobs (Huang, 1993, p. 167). The MOPH emphasised that a high priority needed to be given to on-the-job training so as to improve levels of administrative competence in an efficient and direct way. The MOPH decreed that participation in management education shall be a condition for career advancement in health administration.

The development of China's health management education and training programs is in process. However, greater effort needs to be made in drawing up systematic programs for training and development of health administrators. Fang and Gao (1995) reported that in China there are 500,000 health administrative personnel, but only one percent of them have received three-year tertiary management education, and for over 10 years, about 150,000 administrators have participated in some kind of on-the-job management training program.

Very few health organisations have drawn up systematic programs for the training and development of their managers, based on anything like an audit of future needs and personal potential. Too frequently the choice of who to send on a training program is treated as a matter of status and/or reward rather than one of finding an appropriate match between organisational needs, personal ability and experience, and the content of the training available (Fang and Gao, 1995; Han and Guo, 1992).

It is clear that with Chinese economic reform and changes in the health care system, hospitals are facing many challenges. In adjusting to these changes hospital managers have an important role and managers' competence is critical in contributing to the improvement of hospital management.

Chapter Three

OBJECTIVES AND METHODS

In this chapter, I introduce the objectives and methods of the research. First, I state the main questions which I am trying to answer: 'Are there shortfalls in organisational performance in Chinese hospitals?' 'Are these shortfalls due to the lack of formal management training?'. I present the research model which I have used to think through these questions and to collect and organise my data. I specify the various subsets of questions, relating to each of the domains of the research model, which need to be explored as part of answering the main questions.

Second, I discuss some of the published research of relevance to this project, focusing in particular on ways of conceiving and researching organisational performance, patterns of management practice, management competence, and the administrative and policy environment. Third, I introduce Kunming Medical College and its three affiliated hospitals where the research was conducted. Fourth, I discuss the sources of data used in this research and describe the methods I have used for data collection and data analysis. Finally, I note some of the strengths and limitations of this kind of research and outline the grounds for placing confidence in the findings and conclusion which I have drawn.

Objectives

The need for hospital management training

The research was based on a judgement that there was a need to establish a training program for hospital managers in Yunnan. Implied in this judgement were three assumptions:

- that there were shortfalls in current levels of hospital performance;
- that these shortfalls were at least partly due to a lack of management knowledge and skill among hospital managers; and

- that these weaknesses in management competence could be remedied through formal training.

My initial understanding about the efficiency and quality of hospital care in China was based mainly on personal experience and anecdote. I was aware that, in the hospitals with which I was familiar, there were frequent complaints from patients about long waiting times to see doctors and about bad service manners towards patients. There was anecdotal evidence of overservicing and inefficient use of hospital resources and the available statistics indicated that bed occupancy in 1993 was actually decreasing and length of stay increasing (Yunnan Provincial Health Bureau, 1994). Problems in the hospital sector in China were starting to attract comment in the published literature around this time (Ma and Fang, 1994; Wang, 1990; Wang and Han, 1994; Wang and Fang, 1995; Zuo et al., 1987).

There were grounds for attributing at least some of these problems to the lack of formal management training for hospital managers in China (Guo and Liang, 1994; Fu and Dong, 1994; Liu, 1992). Most senior managers in Chinese hospitals are appointed from among the medical staff and most of them have not had access to formal training in the disciplines of hospital management either before or after they move into management.

This appears to have worked well when Chinese hospitals were tightly regulated and centrally controlled. However, as part of the more recent health system reforms, hospital managers have been given increasing autonomy to manage their human and financial resources. The changing environment has meant increased competition, including pressure for greater efficiency and a higher quality of service, and a new focus of responsibility at the level of hospital management for hospital survival and development. Managers whose experience has been confined to the regulated and controlled environment may not be so well equipped to meet the changing demands of their jobs.

The Chinese authorities have highlighted the relative lack of trained management as a major obstacle to achieving modernisation (Child, 1994, p. 174). As Child states, "the scale of China's management education and training efforts in enterprises is impressive and is a clear manifestation of the regime's determination to modernise the

economy". The Ministry of Public Health (MOPH) has also indicated that all senior managers in the health sector should receive systematic management training. The MOPH believes that formal training will help managers to cope with the new demands of the changing environment (Huang, 1993).

Training needs assessment

A recognition of a general need for hospital management training is not a sufficient basis for detailed curriculum planning. The next stage is to define more clearly the areas of management knowledge and skill which are currently critical in terms of limiting hospital performance and to define the boundaries beyond which training might not be expected to drive improved performance.

To answer these questions required:

- clearer documentation of current levels of hospital performance;
- a clearer picture of the ways in which observed shortfalls in hospital performance correspond to contemporary patterns of management practice and the ways such practice patterns are determined by various factors including managers' competence; and
- a clearer picture of the factors in the wider policy environment (for example, perverse funding incentives) which may also be responsible for shortfalls in hospital performance (but where a lack of managerial competence may not be the critical limiting factor).

This approach to management training needs analysis corresponds to what Kubr and Prokopenko (1991) have described as a 'problem identification and analysis' approach to training needs assessment. Kubr and Prokopenko identify three basic approaches that are used in needs assessment:

- problem identification and analysis;
- comparison, and
- expert opinion.

Dolliver (1993) also discusses needs assessment in terms of problem-solving. A training needs assessment research conducted by Nelson, Whiltener, and Philcox (1995) in the Internal Revenue Services of the United States concluded that training is more effective when needs assessment is based on the identification of current problems that inhibit successful performance.

Kubr and Prokopenko (1991) suggest that a comparative approach to needs assessment can be used when there are accepted standards available (for example, a job description, a competency profile, or a technical performance or standard) or where the characteristics of the 'managers of the future' are known and can be used as a standard against which current competence and/or performance can be assessed. They also point that finding appropriate bases for comparison is often the most difficult part of the assessment. Clearly, there are no established standards which could have been used for this kind of needs assessment in the circumstances in which my research has been undertaken.

The third approach which Kubr and Prokopenko (1991) identify for studying of future training and development needs is using expert opinion. The experienced manager, management trainers, teachers and consultants etc are the major source of expertise in assessing needs. Reichel (1996) emphasises that the best point of departure for assessing management development needs is to turn to those who have successfully reached the highest managerial positions. Many training needs assessment were conducted by collecting information from managers to find out what they actually want and what their needs are (Clement, Paynem and Brockway, 1994; Labbaf, Analoui, and Cusworth, 1996; Rawson, 1986). I have collected the opinions of senior Chinese hospital managers regarding training needs in the course of undertaking this study but only as one source of evidence. I have drawn upon other lines of evidence and argument in drawing conclusions about priorities for training in the three study hospitals.

Snow and Grant (1980) have used a different approach to management training needs assessment. They identify three types of training needs analysis: organisational, operations, and personnel. Each type provides different insights into the development needs of the organisational managers. (See also Wexley and Latham, 1991). Organisational analysis (which corresponds most closely to the approach adopted in

this thesis) determines where efforts should be focused to further the organisational goals, and where training and development should be conducted (Mondy and Noe, 1996, p. 237). A thorough organisational analysis might include an analysis of organisational effectiveness (examining current performance indices to determine whether management development would lead to better performance) (Snow and Grant, 1980).

Operation analysis helps to determine what the content of a development program should be. Operations analysis involves determining the knowledge, and skills and behaviours managers needed to perform their job effectively. According to Nowack (1991) the two primary factors in operation analysis are importance and proficiency. Importance relates to the relevance of specific tasks and behaviours in a particular job and the frequency with which they are performed. Proficiency is the managers' competence in performing these tasks.

Personnel analysis encompasses the determination of limitations which individual managers currently have, as well as the attitudinal and behavioural changes required to improve the manager's performance. Personnel analysis focuses squarely on the individual manager – his or her present education, experience, abilities and attitudes (Kubr and Prokopenko, 1991). Snow and Grant (1980) argue that because it is ultimately the attitudes and behaviours of the individual manager that are modified by a development program, personal analysis is a particularly important part of the needs assessment phase.

The research model

At an early stage in planning the research I created a research framework or model to assist in working through the logic of the research and in planning the data collection (see Figure 3.1).

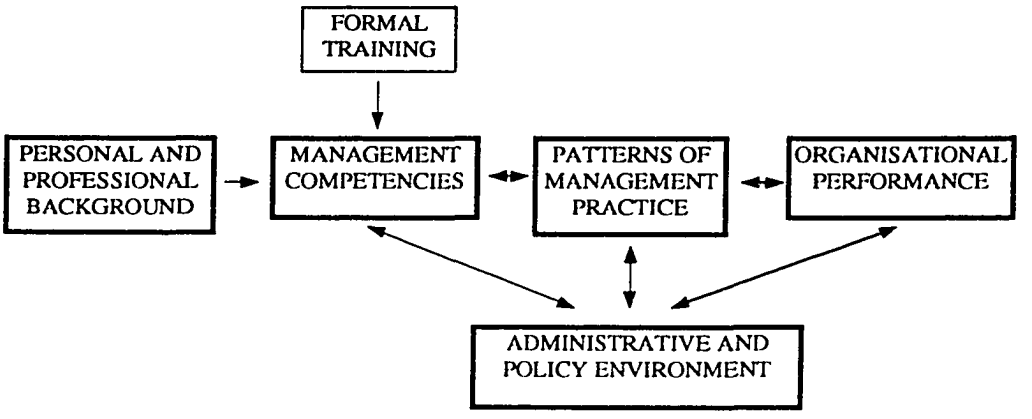

Figure 3.1 Research model (the boxes with bold edges represent those domains for which data were collected for this research.)

In this model the domain 'organisational performance' is determined by 'patterns of management practice' and by 'policy environment'. 'Management practice' is the domain where 'management competencies' and 'policy environment' interact to create outcomes. The impact of 'personal and professional background' is through its influence on the development of managers' competencies.

There are many influences on hospital performance which have been left out of the model, for example, the general level of medical and nursing training in China and the total funding which is available to the health sector in China. These would be important factors to include in an international comparative study of the determinants of hospital performance. However, in this study of the need for management training in Chinese hospitals, these wider factors are assumed to be fixed and have not been included in the data collection.

If this were a study of hospital performance in different types of hospitals in the Chinese system (for example, township, county and provincial; specialist or general) then these different characteristics would have been identified for study and the domains of data collection organised accordingly. This was not the purpose of this study. There are significant differences between the three hospitals included in this study (in particular, size, duration of operation and specialisation) and these differences between the three hospitals have been noted from time to time in the presentation of the findings. However, with only three hospitals in the study it would not be possible

to draw conclusions about the systematic impact of such differences on outcomes and they are not represented in the research model.

In developing the research model I was looking for a framework for collecting and organising data which would help me to relate managerial competencies (and ultimately training) to outcomes (conceived as 'organisational performance'). 'Administrative and policy environment' was conceived as a category in which to locate influences on outcomes which were *not* competencies but which could also be subject to corrective policy action. It is a category in which to locate factors which might have a determining or confounding effect on outcomes and which could be the subject of medium term policy reform. In Chapter two I have described the wider context of this research; the dramatic changes which are taking place in the Chinese health system and in Chinese hospitals as a consequence of the last twenty years of social and economic reform. I have described how these reforms have disrupted older ways of doing things and have precipitated an active searching for managerial and policy responses to the new needs. One possible policy response is to invest in management training.

This model, while useful for research planning, is too simple, a fact which is acknowledged by the two directional arrows in Figure 3.1. For the purposes of this research I have focused on the impact of practice *on* performance and the impact of environment and competencies *on* practice. It is highly likely that there are influences which work in the opposite directions. For example, good performance may contribute to high morale which contributes to better practice. Good performance may lead to easier access to funding. I have been alert to the possibility of 'reverse influences' such as these but they have not been the main focus of my analysis.

Research questions

The model provided a framework for clarifying the kinds of questions that I needed to ask about the areas of hospital management represented by each of the domains and about the relationships between these domains.

Thus in considering the 'organisational performance' domain the key research questions were:

- What are the strengths and what are the shortfalls in organisational performance?
- What are the patterns of management practice which are associated with good and poor outcomes?
- To what extent are the shortfalls in performance and practice due to weaknesses in management competencies and to what extent due to factors in the administrative and policy environment of the hospital system?

In considering the domain referred to in the model as 'patterns of management practice' the key research questions were:

- What are the prevailing patterns of management practice?
- How does management practice shape organisational performance?
- How is management practice shaped by competencies and by environment?
- Could different forms of management practice contribute to changing the wider administrative and policy environment?

In considering the domain 'management competence' the key research questions were:

- What do managers need in terms of management knowledge and skills?
- How is management competence shaped by personal and professional background and/or by administrative and policy environment?
- How might management competence be enhanced by training?
- What might be the limits with respect to the effectiveness of training imposed by the present administrative and policy environment?
- What scope is there for developing managerial competencies that could contribute to improving the administrative and policy environment?

In considering the domain of 'personal and professional background' the key research questions were:

- How does background shape competence?
- What are the implications of background for training?

In considering the domain of 'administrative and policy environment' the key research questions were:

- How does environment shape outcomes, practice and management competence?
- What directions with respect to policy might contribute to an environment more conducive to excellence in hospital outcomes, practice and managerial competence?
- How might different patterns of practice contribute to reshaping the wider administrative and policy environment and what are the implications for competence and training?

I have listed these questions in relation to each of the domains of the research model because these were the questions which drove the design of the data collection instruments and which drove the analysis of the texts generated. However, it is obvious that many of these questions overlap and the findings are presented in a more integrated manner in Chapter Nine.

The elements and the determinants of hospital performance

Later in this chapter I discuss the broad research strategy which I have employed to collect and analyse data which would shed light on these questions. Before doing so I discuss in more detail the ways in which I have conceptualised the domains and the entities 'contained' within these various domains. I also review how they have been measured (or 'estimated' or judged) in previous research and how previous researchers have approached the challenge of drawing inferences about the causal relationships between the 'determinants' of performance and levels of performance achieved.

Organisational performance

I have defined organisational performance in hospitals as comprising two broad areas: current performance in the provision of hospital services, and organisational development, building the capacity of the hospital to provide better services.

I have treated current performance as having three main elements including:

- technical efficiency and productivity,
- quality of care, and
- allocative efficiency and access.

Organisational development includes development of buildings, equipment and technologies, information systems, human resources, organisation (process, structure and culture), system linkages (relations with suppliers and with other parts of the health care system), secure revenue streams and access to capital, and external relations.

Efficiency and productivity

Economists distinguish between two types of efficiency: allocative efficiency and technical efficiency. I have considered allocative efficiency as closely associated with the issue of access (see below). Economists also distinguish between efficiency and productivity. For the purposes of this research I have grouped technical efficiency with productivity although I have maintained the distinction.

Technical efficiency describes the relationship between the cost of inputs and the output produced (Australian National Health Ministers' Benchmarking Working Group (ANHMBWG), 1996). It means the avoidance of waste within the production process (which may be due, amongst other causes, to deficient management) (Mcpake, 1993). Productivity is about the use of particular inputs. It describes the volume of output that is achieved per unit of particular kinds of input (staff, equipment, capital, etc).

Two broad approaches to the measurement of hospital efficiency are evident in the research literature. These may be characterised as direct measurement and the use of quantitative indicators.

The traditional approach to estimating efficiency has been through the use of quantitative indicators generated through the hospitals ordinary administrative systems. The main principle by which efficiency can be assessed is the hospital's capacity to deliver high quality clinical care at least cost. The measurement of efficiency thus involves measuring costs and examining the relationship of costs to the volume and quality of services provided (Chawla, Govindaraj, Berman, and Needleman, 1996). Hospital costs include recurrent costs (such as maintenance, rent, utilities, personnel, catering, laundry, linen, and cost of diagnostic, therapeutic, and other treatment

services provided to the patient) and capital costs (such as land, buildings, plant and equipment). According to the ANHMBWG (1996), the average length of stay (ALOS) for admitted patient episodes is a good predictor of cost and comparing the ALOS for similar services across two or more providers is a simple way of evaluating relative efficiency. Chawla et al. suggest that the efficiency of hospital services is well measured by some traditional indicators including bed occupancy rate, average length of stay and bed turnover rate. To evaluate efficiency is to select performance indicators, such as cost per bed per day, output of services, rate of return on capital, and then examine the performance of the hospital in relation to the indicator. However, they also argue that the effectiveness of such indicators can be seriously undermined by differences in the completeness of data used, and variations in the health, institutional, and economic environment.

More recently, with the development of improved information systems, more precise systems for describing hospital outputs and more sophisticated cost accounting systems and cost models, it has become possible to measure efficiency and productivity more directly. For example, Diagnosis Related Groups (DRGs) are now widely used for comparisons of efficiency between hospitals in many countries (Bentley and Butler, 1980; ANHMBWG, 1996; U.S. General Accounting Office, 1989).

Rosko (1990) identifies three different strategies for measuring hospital efficiency:

- comparison of ratios
- use of multiple regression techniques
- data envelopment analysis (DEA).

The ANHMBWG (1996) has identified a set of ratios which it recommends as appropriate comparators of technical efficiency involving DRGs: cost per casemix-adjusted separation, cost of treatment per outpatient, and average length of stay for top twenty Australian National Diagnosis Related Groups.

There are some limits to the usefulness of simple ratios for measuring efficiency. Rosko comments as follows:

Ratio analysis has been used to locate input/output relationships in HCOs (health care organisations) that are exceptionally high or low. For example extreme values in the following would be indications of inefficiency: a high cost per admission, a high ratio of FTEs per patient (full time equivalent staff), or a lower ratio of meals served per dietary employee hour worked. However, each ratio is limited to one input and one output; thus, ratio analysis cannot accommodate easily the multiproduct nature of most HCOs.

With larger data sets, more complex mathematics and modern information processing, the multiple input and output nature of hospitals can be accommodated. The use of multiple regression as a tool for efficiency analysis is exemplified by the work of Becker and Sloan (1985) who undertook a regression analysis of 2230 hospitals drawing on two large data sets collected through the American Hospital Association. Becker and Sloan took as their dependent variables: 'total expense per adjusted patient day', 'total expense per adjusted admission', 'patient revenue to total cost', and 'total revenue to total cost'. They included a wide range of explanatory variables in their regression models including size, administrative status, proportion of revenue from Medicare, location, and wage rates. They are thus able to estimate what cost per admission should be for an individual hospital on the basis of the regression model and compare that figure with the actual cost per admission reported.

This approach accommodates the multiple input/multiple output character of hospital care. However, Rosko (1990) identifies certain limitations of this approach also, firstly a certain "averaging out effect" and secondly the fact that the technique does not in fact measure inefficiency. Rather, the identification of an inefficient unit requires the use of some arbitrary determined distance from the mean.

Data Envelopment Analysis (DEA) has been used by many health organisations in identifying and measuring hospital inefficiency as a basis for directing management efforts toward increasing efficiency and reducing health care costs (Lynch and Ozcan, 1994; Rosko, 1990; Ozcan and Luck, 1993; Sexton et al., 1989). DEA involves constructing a Best Practice Production Frontier (BPPF) identified as the (multidimensional) surface on which lie the most efficient hospitals in a series and measuring the distance of other hospitals from that frontier (in multidimensional space). The location of each hospital in this space (and therefore their distance from the BPPF

and their relative efficiency) is determined by a complex function which can include a wide range of ratios of particular inputs and outputs.

In many research the available quantitative data are limited. Some indicator data are available although the quality of these data is uncertain. The combination of output and cost data necessary for creating efficiency ratios was not available; far less the large data sets which would be needed for regression strategies or techniques like DEA.

I have collected qualitative data through survey and interview and have sought to make judgements about efficiency on the basis of common patterns of care and illustrative anecdotes as provided by my informants. These data, analysed within a framework which is informed by technical definitions of efficiency and productivity, provide robust grounds for making judgements about efficiency and the various influences on efficiency.

Quality of care

One of the most complex and perhaps least understood concepts in the contemporary rhetoric surrounding health care issues is quality of care. The notion of quality of care has generated an enormous volume of literature over the past 15 to 20 years, and has been the object of serious academic attention. Two dimensions, technical care and interpersonal quality, are discussed in this section.

There are a number of different ways of thinking about 'technical' aspects of care. Perhaps the most widely used is Donabedian's scheme (1980) which categorised quality of care in terms of structure, process and outcome.

In order to measure structure and process of quality, the literature suggests that data need to be collected around a wide range of people, materials, equipment, and the environment within the work process (Chawla, et al., 1996; Tenner and Detoro, 1992), such as ratio: staff/patient day, equipment, drug and supplies availability, maintenance of cleanliness and plant, patient waiting lists for services and expended or reduced access to care for patients with different financial support, patient satisfaction with quality of care, quality of nursing, quality of physical plant, food service and cleanliness of the facility.

Quantitative indicators are widely used in measuring outcomes of care. Chawla et al. (1996) suggest effectiveness in outcomes can be evaluated by looking at indicators of patient recovery and survival, or alternatively at mortality rates in the hospital. Patient acceptability can be assessed by using indicators of follow up visits for improvement (more discussion about patient satisfaction see below). The ANHMBWG (1996) identified three indicators which relate to the clinical process of care and which reflect the ratio of adverse outcomes of care in the Australian hospital system: rate of emergency patient readmission within 28 days; rate of unplanned return to operation room; and rates of hospital-acquired infection (including rate of post-operative wound infection and hospital-acquired bacteraemia).

In thinking about quality measurement it is necessary to consider data source and quality. Hospital managers or planners must rely on data concerning the causes of death and disability and the treatment provided, in order to assess the quality of care. Data may be collected by clinical staff, clerical staff, quality assurance personnel, and medical record personnel. Whoever performs this function, the data must be valid and reliable so that appropriate conclusion can be drawn (Fromberg, 1988).

However, the limitations of data source and data quality, such as medical records, pose serious problems (Demol and Campbell, 1981; Institute of Medicine, 1977, 1980). Several studies have found medical records in hospitals to be inaccurate. For example, Zuidema, Dans and Dunlap (1984) found that morbidity and mortality statistics may be inaccurate or misleading. Thirty-five percent of the discharge abstracts they studied contained errors or discrepancies. Lloyd and Rissing (1985) corroborated problems with the validity of the medical record, particularly as a tool to assess treatment procedures and the quality of care. Romm and Putnam (1981) found that as many as 30% of items from patients' histories that were related to their present illnesses were unrecorded. These studies support the belief that in some cases the physician-patient encounter is imperfectly reflected in the medical record (Tancredi, 1988).

Monitoring quality of care should include interpersonal aspects which should be based, at least in part, on patients' perceptions (Boscarino, 1988; Boscarino, 1992; Davis and Ware, 1988). However, there is no agreement about how interpersonal

aspects should be evaluated or what sorts of methods might be used to make improvements in this area.

Patient satisfaction surveys are widely used in evaluating quality of care from the patient perspective using self-report questionnaire and interview (Boscarino, 1992; Smith and Clark, 1990; ANHMBWG, 1996; Tenner and Detoro, 1992). Valid and reliable question items must be properly administered among a representative group of patients. This means achieving a high rate of participation among patients, which is difficult and expensive. Extensive normative data are also required for comparison purposes to evaluate properly individual hospital results and control for bias. This approach also has another significant limitation. In in-depth interviews with patients quite complex issues emerge; far more complex than can be adequately tapped through short 'patient satisfaction' surveys. Patient satisfaction surveys which pretend to be listening to patients but actually do not give the patients the opportunity to speak about the details of their concerns may be useless (Draper and Hill, 1995).

Allocative efficiency and access

Allocative efficiency means the allocation of resources to the production of outputs which yield the highest value from their use. According to Mcpake (1993), allocative efficiency moves the focus of consideration from technical efficiency with which a particular service is produced to a concern for the allocation of resources across a number of different applications and the usefulness of the outcomes which might be produced by a reallocation of resources.

Allocative efficiency can be measured directly through marginal analysis of the utility of competing uses of funds. However, this is not simple. There are some commonly used indicators of allocative efficiency such as comparisons of waiting times or waiting lists or measures of regional variation in utilisation rates. Collecting such data requires some estimation of the outcomes of care and judgements about the contribution of all relevant service types (e.g. hospitalisation and prevention) to overall outcomes.

The concept of access overlaps with the notion of allocative efficiency. Access relates to the capability of the health system to provide appropriate, affordable and timely care according to need (ANHMBWG, 1996). Hongvivatana (1984)

characterised access as a continuum of coverage including coverage by availability (people for whom the service is available), accessibility (people who can use the service), acceptability (people who are willing to use the service), contact (people who use the service), and effectiveness (ie. people who have improved health status).

There are many strategies to analyse access to care including use quantitative data such as an ongoing sample of users of services, information about socio-demographics, perceived health status, health insurance coverage, sources of health care, and quantitative analysis such as direct experience of people receiving care.

The data sets available in this research were inadequate for either creating quantitative indicators of allocative efficiency and access or for directly measuring these concepts. Judgements about these dimensions and about the determinants of each have been based on qualitative data, general patterns and specific instances, interpreted within a framework which recognises the conceptual logic of the more technical definitions.

Organisational development

Organisational development includes the development of buildings, equipment and technologies, information systems, human resources, organisation (process, structure and culture), system linkages (relations with suppliers and with other parts of the health care system), secure revenue streams and access to capital and external relations.

Much of the commentary in the hospital management research literature which concerns these aspects of hospital performance is based principally on direct experience or on the collection of relatively unstructured qualitative data.

However, within each of these specific areas (buildings, information, personnel ...) there is a range of specialist descriptions and methods for measurement. I have not reviewed this research literature in detail as it is not critical to an understanding of the methods employed in this thesis.

Patterns of management practice

It is well recognised that managers have considerable influence in their organisations, and managers' practice patterns have numerous implications for the efficiency and effectiveness of their organisations (Beston, 1989; Burgess, 1979; Scott and Shortell, p. 419-57, 1988).

In the research model this domain, 'patterns of management practice', was conceived as the place where management competency and policy environment interact to determine hospital outcomes. In approaching data collection and analysis with respect to this domain of the research model I have defined 'patterns of management practice' as what managers do in their day-to-day activities and in handling particular situations.

Several different approaches to describing and evaluating hospital managers' practice are evident in previous research in this area. One approach involves the study of the use of managerial time across various activities, either practical daily tasks (meetings, phone conversations, reading mail) or functional activities such as routine operations management, strategic planning, or personnel management.

Degeling's studies of high school principals, physiotherapists and health service managers (Degeling, 1993) illustrate a set of studies which have focused on the allocation of managers' time in terms of the practical activities of daily work. Lawson, Rotem and Bates (1996, p. 47) summarise Degeling's findings in the following terms:

> managers typically spend their time talking to people; most managers' time is spent working in groups; managers spend a large share of their time interacting with subordinates and peers rather than with superiors; the working day of the managers comprises brief, highly fragmented encounters, most of which are not planned in advance; managers rely more heavily on oral information than on formal, routine reporting procedures; and managers use a variety of different channels of information, never relying solely on formal channels.

Other researchers have focused on functional activities, activities defined more in terms of their purpose than what they involve practically.

Kleiner (1984) and Kindig and Lastiri-Quiros (1989) studied the roles and functions of senior managers and demonstrated that managers are involved in planning, operation design, human resources management, clinical services, and financial

management. They emphasise quality assurance activities, relations with medical staff, and clearly defined goals, priorities and directions (Dunham, Kindig and Schulz, 1994) and adaptive activities such as market and product research and long-range planning (Allison, Dowling and Munson, 1987). Munson and Zuckerman (1988) describe the roles of managers as including scanning the environment for opportunities and risks, enlarging the organisational domain, lobbying, fundraising, and developing new services.

Stern, Schmid and Nirel (1994) evaluated the practice of hospital directors in terms of their orientation to the current operations of the organisation in contrast to a focus on the changing environment of health services. They found that most managers are preoccupied with ongoing operations and routine administrative tasks. They found that managers' activities are not planned, and they respond to ad hoc events in a discontinuous manner. Physician managers in particular tend not to realise the importance of strategically managing, planning, and adapting the organisation to potential and existing opportunities and risks (Kovner and Chin, 1985; Tabenkin, Zyzabski and Alemazno, 1989).

Another approach to describing the work of managers involves looking at the different roles that they play in system terms, well illustrated by Lawson (1991) who observed that successful managers 'use their processes to influence events, to exert authority, to allocate resources, to gather information, to gain support and to mobilise action'.

In this research I have used 'functional activities' as the main criterion for categorising managers' practice. Most previous researchers studying patterns of management practice have relied on interview and questionnaire survey although some have used direct observation (Lawson, 1991; Degeling, 1993). I have relied entirely on interview and survey in my data gathering.

Management competence

Hospital management competence, for the purpose of this research, means the knowledge and skills that managers use; it is that set of knowledge and skills that a manager needs to master and to apply effectively if he/she is to be successful (Lawson et al., 1996). Hudak, Brooke, Finstuen, and Riley (1993) have suggested that proper

attention to managers' skills, knowledge and abilities in management is critical for the survival of their hospitals.

In fact, many commentators have suggested that hospital managers' competence is becoming increasingly important because of the increasing rate of change in the health care system and the heavy demands placed on providers of care and those who lead and manage the delivery system (Burke III and Bice, 1991; Glass, 1990). Other commentators have suggested that improved managerial capability will lead to higher overall hospital performance (Snow and Grant, 1980).

Most studies of hospital manager competence appear to use either self-administered questionnaires or interviews or both (Johnsson, 1991; Hudak, et al., 1993; Kazemek and Doody, 1991; Luke and Begun, 1987; Reagan, 1990; Seaver, Hilling and Redmond 1990; Westbury, 1990).

I have used Rawson's survey method both in my self-administered questionnaire and my interviews. Rawson (1986) conducted a survey of 821 managers from Australian hospitals and health organisations using a questionnaire survey with follow-up interviews. Because of the large number of competencies that he was interested in (and the difficulty for respondents of placing a large number of management knowledge areas and skills in order of priority), Rawson categorised hospital management competencies into twelve areas on the questionnaire and sought from his respondents a judgement about the importance or unimportance of the broad groupings and also sought a comment on the important elements of competency within each broad grouping. Rawson's 12 broad groupings were as follows:

1. Background competence
2. Personal and interpersonal skills
3. Industrial relations
4. Financial management
5. Analytical methods and information processing
6. Health policy and politics
7. Organisational management

8. Health service planning
9. Economic factors in health services
10. Health service context and structure
11. Management of change and future development
12. Social and cultural aspects of health

Rawson's experience suggests that this broad categorisation corresponds to the understandings and expectations of Australian managers. The group concluded that personal and interpersonal skills including leadership abilities, staff motivation, dealing with conflict and stress and personnel administration were overwhelmingly important for all upper-level managers.

Other studies (Johnsson, 1991; Luke and Begun, 1987; Seaver et al., 1990; Westbury, 1990) have also emphasised the need for strong competencies in managing people including excellent communication skills with people at all levels in an organisation as well as with external contacts, interpersonal skills to interact well with people throughout an organisation and community, effective leadership abilities, the ability to understand others' frames of reference, conflict management, and team-building skills.

Reagan (1990) highlighted the areas of interpersonal skills, knowledge of the health care sector, the practicum, and financial management among the most important competencies needed in hospital managers' practice. Other researchers (Hudak, et al., 1993; Kazemek and Doody, 1991) have concluded that in addition to the skills of managing people, hospital executives also need a good understanding of health care finance and payment, financial management, strategic planning skills, marketing experience, and information systems.

In my research I am seeking to make judgements about levels of competence, conceived broadly in terms similar to those used by previous researchers and also to draw inferences about the relative role of competencies, in comparison with environmental factors, in determining hospital outcomes. There is a wealth of commentary in the literature about the importance of professional competencies for

organisational performance; most of this comment appears to be based on expert opinion or survey opinion rather than any quasi-experimental or correlational research.

Personal and professional background

I have collected descriptive data about managers' personal and professional background (including gender, age, education levels, discipline speciality, professional levels, administrative position and how long managers have been appointed to a managerial position) with a view to exploring some of the features in the personal and professional background of KMC hospital managers which might influence their competence, their patterns of management practice and their organisational performance. The data collected for this purpose have been abstracted from administrative sources.

Administrative and policy environment

My purpose in studying the 'organisational and policy environment' was to generate an overview of the 'policy environment', as it affects the work of managers in the hospital system, with a view to drawing inferences about the relative importance of policy factors, in contrast to competencies, in determining practice and organisational outcomes. In these respects my research is somewhat different from most previous work which has looked at the impact of the policy environment on organisational performance. In most of the research which has been published the authors have started with a concern about particular 'sectors' of policy, or particular aspects of particular policies, and the impact of such policies on particular measures of hospital performance.

One of the commonest kinds of research in the international literature has been studies which related funding arrangements to access. For example, Davis and Rowland (1991) explored the impact of financing policy, especially Medicaid policy, on health care for the poor in the United States. This research depicted the barriers to access to health care services caused by gaps in insurance coverage, and the gains in terms of improved health from expanded access. They argued that governmental health programs have an important impact on access to health services and outcomes with regard to the poor and their health care needs. This was consistent with the

findings from a study of health care access for people with difference health insurance coverage done by R. Trevino, F. Trevino, Medina, G. Ramirez, and R. Ramirez (1996). The results identified that the poor people with health insurance had higher health care access rates than did the poor people without health insurance. The uninsured poor were poorer and less educated, and were those most in need of health care.

Many studies relating to health care financing policy have been conducted in China since the 1980s. Tang and his colleagues (1994) documented health expenditure, and utilisation of health services in rural areas under the change of Chinese health care system. The findings demonstrate a considerable increase in total recurrent expenditure in the Chinese health care sector in recent years. However, there are also increasing financial barriers to access to care and the high cost of hospital care was an important deterrent in the poor areas. Another study relating to the issues of access to care and the impact of health policy changes in China was done by Zheng and Hillier (1995). They conducted a household survey, collected medical expenditure and patient data in a number of hospitals, and gathered official statistics and annual reports from government bureaux. Their results show that the changing health financing system and managerial systems caused problems for people seeking health care.

Gu and his colleagues (1993), X. Liu and Hsiao (1995), Y. Liu et al. (1995), and Shi (1996) studied the financing mechanisms in China using data from government sources and/or conducted household surveys using questionnaires and interviews. They suggested that changes in hospital financing and payment policy had led to increases in health expenditure. Drug charges and costly technologies are the important sources of revenue for rural hospitals and prescribing and utilisation patterns appeared to have increased disproportionately. They also argued that hospital charges were a barrier to patients who are not covered by an insurance scheme.

In the present research my objectives were first, to collect descriptive data (from my respondents and from administrative sources) which would provide a broad picture of the policy environment; and second, to collect opinion and instances of practice which would support inferences about the relative importance of environmental factors in shaping organisational performance. The broad categories under which I have discussed the 'policy environment' (see Chapter Eight) correspond to the various streams of comparable work in the published literature.

The use of questionnaire and survey strategies to collect such data has strong precedents in the published literature. Milio (1992) comments that interviews can allow interviewees to give their attention to one set of issues requiring not only recollection but also reflection. Interviews were used in 12 health program and policy studies by Milio herself over the last decade. Questionnaire survey is also a common method in collecting data for policy analysis. I have also used documentary sources to supplement the data generated in the interviews and survey. Review of documentation, as Brown (1991) describes it involves reviewing of reports, statistics, and previous research findings for gathering, cataloguing, and correlating facts that depict the state of the world that policymakers hope to change.

Conclusions

I have set forth the formal research model which has guided this research including the main research questions. This involves first, making judgements about each of the domains and, second, drawing inferences about the relationships between the entities represented by each of the domains. I have reviewed each domain with a view to, first, discussing how I have conceptualised the elements which constitute that domain and second, discussing different research strategies which have been used in evaluating these domains and their system relationships.

The research strategies referred to fall into several broad groups. In estimating (measuring, judging) the various domains researchers have variously employed:

- direct measurement or observation;
- use of documentary and administrative sources;
- use of quantitative indicators; and
- collection of respondent opinion and experience through survey and interview.

For example in making judgements about the causal relations between factors, which the domain of managers' competence and various aspects of hospital performance, research strategies similarly vary from the interpretive to the use of quantitative tools for measuring correlations (such as regression analysis).

The research reported in this thesis is based on the collection of opinion, experience and attitude from managers, supplemented by the use of some indicator data and documentary data. In drawing inferences about causal links between the domains of the model I have likewise depended on the advice of my respondents and the logic of the qualitative evidence interpreted within the broad framework I have outlined. McClelland (1993) has argued that, in most cases, surveys combined with individual interviews provide a good degree of consistency in defining managers' development needs. These are commonly supplemented with organisational and personnel records (including performance indices and staff appraisals) (Glass, 1990; Lin, 1996; Snow and Grant, 1980).

Limitations in the amount and quality of data available have restricted my choices with respect to research strategies. Although I was provided with the opportunity to obtain the personnel data of managers and some administrative data of these three hospitals, I was unable to collect some other information such as hospital financial data. I did not use direct measurement or direct observation in this study.

Overview of research strategy

This research was carried out in three teaching hospitals within the KMC system (see research setting below) during July and September 1996. A self-administered questionnaire survey was undertaken including all managers of these three hospitals - a total of 342. Twenty managers were selected from the larger set for indepth interviews.

I collected data relating to the various domains of the research model through a self-administered questionnaire survey and through interviews. In designing the survey and the interview schedule I was seeking first, to tap the opinions of the managers on the matters in question; and second, to generate textual data from which inferences might be drawn about the issues in question. I was aiming to get the managers talking about these issues and to listen to the way they talk and the examples they provided as a basis for making judgements about the matters in question.

The survey and interview questions were designed to make sense to the respondents in the context of filling in the questionnaire or being interviewed rather

than being particularly focussed on one or other of the research domains. However, more of the survey and interview questions (including the follow-up prompts) were designed to elicit comment on various different domains of the model. The relationships between the research questions and the questions in the survey and interview were 'many to many' relationships (see Appendix A and B). Each one of the research questions prompted a series of different questions to the respondents; and each one of the questions to the respondents was seeking data on several of the research questions.

The coding framework which I have used in analysing the texts produced through the survey and interviews was developed through an iterative process involving close attention to what the respondents were saying, continuing regard to the broad research model and close attention to the current literature regarding the areas included in the model. I worked through this cycle several times before settling on the coding framework which I have eventually used (see more detail below).

The research setting

Kunming Medical College

Kunming Medical College (KMC) is the premier higher education institution in Yunnan Province specialising in medical and health disciplines. Initially set up in 1937 as the School of Medicine within Yunnan University, Kunming Medical College was established in 1956 as an independent institution providing a six-year training program. Since 1978 faculties of Preventative, Stomatology and Forensic Medicine have been successively established in addition to the original faculty of Clinical Medicine.

KMC is located in central Kunming. By 1996 it offered eight undergraduate programs -- clinical medicine, preventive medicine, dentistry and oral surgery, forensic medicine, pharmacology, anaesthetics, laboratory medicine and medical photo scanning and images; and another three professional training school programs: maternity and paediatric hygienic, nursing and nutrition. The College also has a Faculty of Adult Education. These teaching and research sections make up the total number of 68. It

has three affiliated hospitals with a total capacity of 2,400 beds which are noted for their many top-level experts and specialities across the province.

The College now has more than 4,800 full time staff, of whom there are 3,155 teachers (including members of the three affiliated hospitals), 79 professors and 259 associate professors, an enrolment of 4,674 undergraduate students (approximately 20% of the students are from the minority nationalities of Yunnan Province), and 85 postgraduate students (in 1996). The graduates of KMC provide most medical care services in the province and many of them work in the poor and remote areas of Yunnan.

Kunming Medical College has adopted and actively pursues a set of key principles. Among these, the College is committed to:

- actively meeting the medical needs of Yunnan Province;
- paying particular attention to teaching and training whilst also recognising the importance of increased knowledge through medical research; and
- training medical staff from all nationalities and regions of Yunnan Province.

The College operates under the three-tier administrative system. The administration is headed by the president (*yuanzhang*) who is also the Party Secretary of the College, and a medical specialist trained in neurosurgery (professor of neurosurgery). The president himself is in charge of personnel, financial and international affairs. Under the president, three vice presidents (*fu yuanzhang*), all of whom are Party members, oversee the medical college: medical education is headed by a physician trained in endocrinology, medical research by a physician trained in liver and gallbladder surgery, and administration and supply by an ex-army officer.

Deans and directors are in charge of the relevant affairs of the various faculties and administrative offices. Generally there is a dean or director and two deputy deans or directors in each faculty or administrative office. In total, there are about 50 middle level administrators within the College, most of whom have medical backgrounds but some are educated in social science, and a few are retired army officers.

Under these faculties and administrative offices are teaching and research sections and administrative divisions. A chief and chief assistant are in charge of each division and there is a total number of 150 administrators at this level.

The First Affiliated Hospital

The First Affiliated Hospital of KMC is a comprehensive clinical and teaching hospital. Founded in 1941 as the Affiliated Hospital of the Medical Faculty of Yunnan University (or Yunda Hospital) it was subsequently named as the Affiliated Hospital of Kunming Medical College with the independence of the College in 1956, and then renamed as the First Affiliated Hospital of Kunming Medical College in 1963 when the Second Affiliated Hospital was established.

The hospital is located in central Kunming. It treats an average of 3,000 out-patients each day through the largest facility in Yunnan Province, and its 1,000 beds cater for approximately 18,000 in-patients annually. To meet these demands the hospital has a medical and technical staffing complement of over 2,300. To meet growing community needs, a branch hospital with 450 beds was opened in 1988.

The hospital has 54 clinical and paramedical departments, 27 areas which are divided according to disease category, 18 clinical teaching and research units, and eight research laboratories. It is responsible for the clinical teaching of many students of the Faculty of Clinical Medicine of KMC. It awards masters degrees through 17 programs, and the Department of Aneasthesiology has been accredited to award doctorates. There is a nursing school with a three year program. It also undertakes the training of medical professionals at the district and county levels. Located within the hospital are 10 provincial research centres.

In the last ten years, the hospital has been well equipped with imported medical apparatus and instruments including advanced colour ultrasonic scanners, helical CT, MRI and other modern equipment.

The hospital has a two-tier administration system at hospital and department levels. The administration of the First Affiliated Hospital is headed by the president appointed in 1995 who is an associate professor of respiratory disease. In addition to hospital administration, he oversees the personnel and financial divisions and the

presidential office. Three vice presidents head the divisions: medical treatment (including nursing) led by a professor of neurosurgery; medical education and research led by an associate professor of ophthalmology who is also in charge of the Branch Hospital; and administration and general affairs led by an ex-army officer who does not have a medical background. There are 20 administrative divisions that carry out the functions of each aspect of hospital operation.

The Party secretary is an associate professor of nephrology and she was vice president of this hospital (in charge of medical treatment) for four years before taking up her present position. Although under the president responsibility system, the Party committee plays a role of guarantee and supervision; as a medical professional, the secretary is still involved in many practical aspects of hospital administration, such as quality control. The deputy Party secretary is an ex-army officer; he is mainly in charge of the staff union, youth league and hospital discipline[1].

The Second Affiliated Hospital

The Second Affiliated Hospital of KMC is a general hospital located in the west of Kunming city. Originally, it was a hospital for workers' medical care. In 1963 the hospital officially became the Second Affiliated Hospital of Kunming Medical College.

The 900 bed facility contains 30 clinical departments and 15 medical laboratories, as well as an elaborate administrative and property management system. It has 1,300 full time staff members (including 180 professors and associate professors) and serves an average of 1,500 outpatients daily and 10,000 inpatients yearly.

The hospital accepts graduates from 3-year and 5-year clinical teaching programs of KMC. It offers master's degree programs in 12 subjects. There is a nursing school located on site. The hospital also serves as the authoritative institution for the Burns

1. The hospital Discipline Committee performs its task under the leadership of the Party committee and its higher counterpart. Being an inspective organisation, its main tasks are: to check or sense the situation of Party and State policy performance in its own unit; to protect the legal rights of the Party members; to inspect and deal with cases of corruption and law-breaking activities; and to help the Party committee to give instructions to Party members about how to carry out the Party's line, principle and policy.

Research Centre, the Liver, Gallbladder and Pancreas Surgical Research Centre, and the Eye Storehouse Centre of Yunnan Province.

The hospital is well equipped with modern technology, including model-stereo-ultrasonic diagnostic system, full colour ultrasound, spiral and whole body CT.

As with the First Affiliated Hospital, the hospital operates under a two-tier administration system. Top management consists of one president and three vice presidents. The president is a professor of liver and gallbladder surgery. He became the president in 1991 and won the National Hospital President award from the Ministry of Public Health for excellence in hospital management. Three vice presidents oversee the divisions: medical treatment (including nursing), led by an associate professor of cardiac surgery; medical education and research, led by a professor of liver and gallbladder surgery, who was also appointed to the new position as the vice president of Kunming Medical College during the period of this study but he still works at the hospital; and administration and general affairs led by an ex-army officer without medical background.

The Party secretary is an ex-army officer. His job involves conducting the ideological and political education of staff members, supporting the president and participating in personnel administration (especially cadres selection and middle level appointments).

The Third Affiliated Hospital

Officially opened in 1992, the Third Affiliated Hospital of KMC (or Yunnan Tumour Hospital) is the first modern, standard provincial hospital in Yunnan Province to provide specialist treatment of tumour patients combined with teaching and research.

The hospital is located in the west of Kunming city. It has 500 beds and 750 staff members. Eleven specialist clinical departments have been established within the hospital to meet the various needs of tumour patients. The hospital employs many oncology specialists, professors and doctors who are leaders in their specialised areas. They undertake advanced forms of treatment in surgical, radiotherapy, chemotherapy and immunotherapy procedures.

The hospital is well equipped with modern medical instruments and apparatus including computerised tomography, linear accelerator, computerised sonarography system, and Co-60 machine.

The hospital also practises a two-tier administrative system. The president is a professor of cardiology and was appointed in 1995, previously he was the vice president of the First Affiliated Hospital. Under the leadership of the president, two vice presidents head the divisions: medical treatment (including nursing) and teaching, led by an associate professor of oncology of internal medicine and who is also the head of the Oncological Department of Internal Medicine; administration and general affairs are led by the vice president who is an associate professor of cardiology and was the deputy Party secretary of the hospital.

The Party secretary is a physician trained in internal medicine (an associate professor) and worked in a county hospital as the president for 18 years. His work mainly concerns the Party Committee, the union and the youth league, and he also participates in managerial work, especially personnel decision-making, quality of care and hospital financial expenditure. The deputy Party secretary is an ex-army officer who worked in KMC as a general administrator for six years and has moved to this hospital since 1995. His job is to supervise hospital discipline.

Data collection

There were four main data sources in this research:

- Self-administered questionnaire survey;
- Interview survey;
- Use of hospitals' administrative data, and
- Documentary sources.

These data collections were undertaken with the approval of the Faculty of Health Sciences Human Ethics Committee, La Trobe University. Approval for accessing the personnel files was obtained from the President of KMC and the Presidents of the Affiliated Hospitals. The data are maintained securely.

Self-administered questionnaire survey of hospital managers

The sample

The sample of the self-administered questionnaire survey was the complete set of 342 identified hospital managers within the KMC system.

Development of a database of managers

A data base of hospital managers in the KMC system was created, firstly, to identify the sample of managers for the self-administered questionnaire, and also to provide a reference against which to relate the profile of the respondents to the self-administered questionnaire and the sample of managers selected for interview. Secondly, the data base provided a basis for an overall descriptive analysis of managers within the three hospitals.

The data items in the data base include: name, date of birth, gender, managerial position, educational history, work history and name of employing hospital. These data were obtained from the personnel departments of each hospital. A total of 342 managers was identified and included in the data base.

Dispatch and response

The questionnaire was despatched to all 342 hospital managers within the KMC hospitals by their hospital. Each was numbered for checking respondents and identifying non-respondents. Managers from whom no response had been received two weeks after the survey was despatched were followed up by phone and again two weeks later if no questionnaire had been returned.

Of the 342 managers to whom questionnaires were sent, there were 209 received by the due date (61%) and a further 46 responses were received after follow-up. Thirteen questionnaires were incomplete and were removed from the sample. Consequently, 242 completed questionnaires were analysed representing 71% of the identified population. Table 3.1 shows the distribution of the sample across the three hospitals and the response rates for each hospital.

Hospital	Total sample		Response rate	
	No	%	No	%
First Affiliated Hospital	134	39	91	68
Second Affiliated Hospital	155	45	113	73
Third Affiliated Hospital	53	16	38	72
Total	**342**	**100**	**242**	**71**

Table 3.1 Questionnaires sent out and received across the three hospitals

The questionnaire

Description of the questionnaire

The self-administered questionnaire included questions about managers' personal characteristics such as age, sex, present administrative positions, formal education, professional qualifications, and distribution of work time.

Eight open-ended questions were developed in order to identify relevant items and approaches of the research domains, and to add a qualitative, personal and more candid dimension to the survey. These questions included the issues of recent improvements in hospital management, frustrations and problem areas in managers' jobs, reforms contributing to improved patient care and improved efficiency in hospital, management knowledge areas and skills contributing to success as a hospital manager.

The relationships between the interview and survey questions and the domains of the research model are summarised in Table 3.2.

Domains of the research model	Survey questions	Interview questions
Organisational performance	12, 17	3, 9, 10
Patterns of management practice	11, 12, 13, 15, 17	3, 9, 10, 11
Management competence	10, 18, 19, 20	8, 12, 13, 14
Administrative and policy environment	12, 13, 15, 17	3, 9, 10, 11

Table 3.2 The relationships between the interview and survey questions and the domains of the research model

At the end of the questionnaire, three questions relating to management competencies were asked, supported by a list of the eleven groups of knowledge areas and skills based on Rawson's competencies which was provided (details about Rawson's competencies see below).

A cover letter from KMC accompanied the questionnaire describing the purpose of the study, requesting participation and providing assurance about the confidentiality of responses (see Appendix A).

Development of questionnaire

The first round of draft questions was created based on the research model and the research questions listed above. The development of the questionnaire focused on problems managers face in their daily work, the obstacles, recent improvements, and reforms that they would like to see. Within this broad focus on difficulties and successes I was seeking to direct the attention of the respondents variously to the different domains of the model. So these questions include the various management knowledge areas and skills measured from differing perspectives; managers' comments on the changing patterns of management practice and styles of handling particular situations, and their views on the possible concurrent changes in the administrative and policy environment which are likely to affect hospital performance.

Several versions of the draft questionnaire were sent to colleagues and experts in the field of health administration in Australia for advice and discussions were held with them. Their comments were useful in reviewing and modifying the questionnaire.

Before the questionnaire was finalised, a pilot study was conducted in Australia. Questionnaires were sent to 40 hospital managers, and interviews were carried out with 6 of them. Undertaking the pilot study was helpful in finalising the questionnaire and interview guideline form, as well as obtaining experience with the data collection process and data entry and analysis.

This questionnaire was piloted by three Chinese hospital managers in Kunming for understandability and unambiguous interpretation when it was translated into Chinese.

Use of Rawson competencies scale

In 1986, a large scale national investigation into characteristics and educational needs of the field of health administrators was implemented by Rawson and his colleagues in Australia (Rawson, 1986). In this survey, respondents were asked questions about present managerial educational needs. Because of the difficulty for respondents in placing a large number of management knowledge areas and skills in order of priority, Rawson categorised them into twelve areas on the questionnaire and an importance ranking was sought on the broad group and on the more specific competencies within each of the broad groups. 'One of the purposes of doing this was to obtain a broad perception of priority areas from health managers in successful management performance.'

Eleven (of the 12) groups of management knowledge areas and skills developed by Rawson and his colleagues were used on the questionnaire for collecting data regarding managers' competencies in the research. This instrument was used because it covered a wide range of management knowledge areas and skills and it was expected that the groups of knowledge and skills would be convenient for assisting Chinese hospital managers to vide valid responses. However, the industrial relations grouping was not used in this study because it was considered that it was not so relevant to the Chinese situation.

There were some limitations associated with the use of Rawson's instrument in this research. Because the ranking questions only sought the respondents' top three or top six rankings, the results provide more information at the top end of the scale (the high priority end) than the bottom end (low priorities).

I am aware of the influences of both the culture and system which have shaped Chinese organisation behaviour and therefore moulded the features of management (e.g. over 40 years of top down planned social economy, and Confucianism which embodies favours organisational hierarchy and traditional bureaucratic system in Chinese society (Needham, 1980; Shenkar and Ronen, 1987). But I think that it is fine to use some Western framework (e.g. Rawson's competency list) if we remain open to the inevitability of dissonances and keep a close eye on what the respondents are telling us.

The background of questionnaire respondents

The data of respondents' background in this section include: age, gender, professional training (level and discipline) and period in management. Respondents were judged to be representative of hospitals and administrative position levels[2] (see Table 3.3).

	Overall		PM		DM		GA	
Hospital	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
First Affiliated Hospital	91	37	5	6	66	3	20	22
Second Affiliated Hospital	113	47	4	4	82	72	27	24
Third Affiliated Hospital	38	16	4	11	23	60	11	29
Total	**242**	**100**	**13**	**5**	**171**	**71**	**58**	**24**

Table 3.3 Groups of respondents with frequencies and percentages.

The sex and age of the managers in the respondents are presented in Table 3.4. Forty-nine percent of the managers are men. The average age of the respondents is 45 years. The managers are likely to be between the ages of 40 and 49 years.

2. Managers at the presidential level (PM) include president, vice-president and Party secretary and deputy-secretary; at the departmental level (DM) include head and head assistant of department, head and head assistant of nursing; at general administrative division (GA) include chief and deputy-chief.

Characteristic	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Sex							
Male	49	57	42	50	77	43	59
Female	51	43	58	50	23	57	41
Age							
25 – 29	2		3	4		1	5
30 – 34	7	4	4	13		9	5
35 – 39	12	3	10	13		14	7
40 – 44	24	22	27	14		23	31
45 – 49	15	11	19	11	39	9	26
50 – 54	20	29	19	16	31	21	14
55 – 59	19	30	15	19	31	21	9
60 – 64	0.4			3		0.6	
Non-response	1	1	3			0.6	4
Average age	45	49	43	45	51	45	44
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 3.4 Sex and age of managers in sample of questionnaire survey.

Table 3.5 shows the distribution of the highest degree of formal education completed and the years of graduation of the managers. On this measure about half of respondents have a bachelor degree, only eight percent claimed post-graduate education.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Highest education							
vocational diploma	14	11	15	24		13	24
tertiary diploma	24	24	22	26	31	21	29
bachelor degree	49	52	50	42	69	56	26
post-graduate diploma	0.8		2			1	
master or higher	7	9	5	5		9	2
other	5	4	5	3			19
non-response	0.4		0.8			0.6	
Years of graduation							
5 - 9	15	12	15	24	8	8	21
10 – 14	16	11	21	13	15	20	5
15 – 19	5	4	5	5		5	5
20 – 24	16	11	19	21	23	14	22
25 – 29	15	22	12	8	23	15	12
30 – 34	13	19	9	11	15	16	4
35 and over	6	9	4	8	15	6	4
non-response	14	1	7	11		10	28
Average year	18	20	16	17	24	19	14
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 3.5 Highest education and years of graduation of respondents.

Of the 242 respondents, over 50% have a medical background, 70% of the presidential respondents are medically qualified but only 35% of the general administrators are medically qualified. (See Table 3.6).

Discipline speciality	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Medicine	53	56	54	40	69	60	35
Pharmaceutical	2	3	2			2	3
Medical technology	7	10	5	8		8	9
Nursing	23	17	27	29		30	17
Other	15	14	12	23	31		36
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 3.6 Discipline speciality of respondents.

The distribution of managers' professional titles is summarised in Table 3.7. Fifty percent of the total respondents identified themselves as being professors and associate professors, and 40% as lecturers.

Professional title	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Professor	14	23	7	11	23	17	2
Associate professor	37	40	35	22	46	41	21
Lecturer	40	31	49	37	31	37	52
Assistant teacher	6		7	18		5	12
Other	3	6	3				14
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 3.7 Professional titles of respondents.

Seventy percent of respondents have been appointed to a formal managerial position for less than ten years, and two percent have been working in formal management for over 20 years. (See Table 3.8).

Years appointed to a managerial position	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
1 - 4	32	10	45	47		37	26
5 - 9	36	48	33	18	46	33	45
10 – 14	19	31	10	16	46	18	19
15 – 19	5	2	5	11	8	5	4
20 – 24	1	1	2			2	
25 and over	.8	1		3		.6	2
Non-response	5	7	4	5		5	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 3.8 The years which respondents have been appointed to a position with formal management responsibilities.

Representativeness of the respondents

According to a statistical analysis using chisquare test with SPSS, the likelihood of the true distributions of the 242 respondents' administrative positions, sex, age, highest education degree, disciplines, professional qualifications, years appointed to a managerial position and working units differing significantly from the true distribution of these variables for the full set of 342 hospital managers within the KMC system was less than five percent.

Interview survey of the selected hospital managers

An interview survey was undertaken on a sample of 20 selected managers within the KMC hospital system. The sample was a cohort of hospital managers who were selected by the College leadership to participate in the Jiangsu Hospital Management Training Program[3].

3. The Jiangsu-Victoria Hospital Management Training Centre was established in 1989. It is located in Jiangsu Medical Staff University (JMSU). The program aims to provide participants with knowledge and skills relating to the main functional areas of hospital management. The students are from the hospitals and bureaux of health of Jiangsu Province. Most of them (80%) are hospital managers. The course is taught as a part-time correspondence course over two years. It is taught in

Selection of 20 managers to participate in management training

In 1996 the leadership of KMC made a decision to send a group of KMC hospital managers to participate in a two year Jiangsu Victoria Hospital Management Training Program (JVHMTP) in Nanjing (distance education, from 1996 to 1998) as an interim approach to developing management expertise in the KMC system[4].

The selection of these 20 managers was conducted by the leadership of KMC. The following issues were taken into consideration:

- record as a manager;
- enthusiasm and capability;
- career potential as a management leader and teacher; and
- spread across three hospitals and across administrative levels (from presidential level to departmental level, including general administration)

The distribution of the 20 selected managers is shown in Table 3.9. Half of the managers are from the First Affiliated Hospital as it is the largest one among these three hospitals. A large proportion of the managers are at the presidential level (35%) with the comparison of total number of presidential managers to the total population of hospital managers.

Chinese. The students receive face-to-face instruction from visiting faculty members in each subject. From 1992 to 1995, 360 students graduated.

4. Early in my research planning I explored the possibility of approaching the impact of training on hospital management through a semi experimental design which involved arranging for 20 managers from the KMC hospital system to participate in the hospital management training program run through the Jiangsu Staff Medical University in Nanjing and also following a matched control group who did not participate in management training. This study is continuing and will be reported in due course but is not the focus of this PhD thesis.

Hospital	PM		DM		GA		Total	
	No	%	No	%	No	%	No	%
First Affiliated Hospital	3	15	7	35			10	50
Second Affiliated Hospital	2	10	2	10	2	10	6	30
Third Affiliated Hospital	2	10	1	5	1	5	4	20
Total	**7**	**35**	**10**	**50**	**3**	**15**	**20**	**100**

Table 3.9 Distribution of the selected managers for participating in the JVHMTP and being interviewed.

Table 3.10 gives the basic personal characteristics of the 20 managers. Sixty-five percent are men, particularly from the First Affiliated Hospital (80%), but all the participants from the general administrative section are women. The participants from the First Affiliated Hospital have a higher educational degree as compared with managers in the other two hospitals, and the general administrators have a lower level of educational achievement than those who work at the departmental level.

Characteristic	Number	Characteristic	Number
Sex		*Professional title*	
male	13	professor	
female	7	associate professor	12
		lecturer	8
Age		*Highest education*	
30 - 34	3	vocational diploma	1
35 - 39	6	tertiary diploma	4
40 - 44	4	bachelor degree	8
45 - 49	3	post-graduate diploma	1
50 - 55	4	master or higher	6
Average age (years)	42		
Total number	**20**	**Total number**	**20**

Table 3.10 Basic characteristics of the 20 selected managers.

In comparison with the total 342 managers in the KMC system, the interviewees comprised more males (65% of participants versus 46% of the 342 managers) than female, more senior (35% are presidential leaders), younger (65% are under the age of

45 years), and had higher educational qualifications (35% have a post-graduate or higher degrees). Among the interviewees there were no managers with a title of professor (more details of basic characteristics of the 342 managers are discussed in Chapter Four).

Development of the interview schedule

The interview questions were created to elicit data which would cast light on each of the main domains of the research framework indicated in Figure 3.1 above, although the questions were constructed and sequenced to make sense to the respondents rather than focussing sequentially on the different domains of the model.

The interview schedule was developed in Melbourne at the same time as the development of the survey questionnaire. A draft interview schedule was developed following standard guidelines (Judd, Smith, and Kidder1991; Fink, 1995; Miles and Huberman, 1994) and redrafted in consultation with colleagues with a view to eliciting data across the five domains. It was piloted first in Australia and subsequently in translation in China with a view to ensuring that the questions were clear and unambiguous. The final interview schedule included 14 open-ended questions (see Appendix B).

Conduct of interviews

The 20 managers selected for training in the JVHMTP were interviewed. A special meeting was held by the leadership of KMC and the participants included the president and the Party secretary from the three affiliated hospitals. The purposes and elements of this research were introduced in this meeting. The interviewees were asked to participate in this research by KMC through their own institutions, explaining that this project is part of formal program of collaboration between KMC and La Trobe University. A personal letter was sent to the interviewees to explain the purpose of the research and provided assurance of confidentiality.

Interviews were carried out at all the three hospitals by myself. Each hospital provided a quiet office for all of the interviews at that site. Before each interview started the interviewee was given an explanation of the research and an undertaking that the answers would be kept strictly confidential and that interviewees will not be

identifiable in published materials produced through the project. The interviewee was also asked for his/her agreement to the interview being taped. Each interview took around one hour. Almost all the interviewees were keen to talk and tried to answer every question clearly.

Use of administrative data

Indicators of hospital performance used in this study were obtained from the Department of Patient Records and Statistics at each hospital.

These data were generated as follows. Patient status at the point of separation (death discharge or transfer) is recorded on the front page of the medical record by the junior doctors in the unit responsible. The form on the front page includes questions about alive or dead, cure status, diagnostic accuracy, and so on. These discharge data are then abstracted from the individual patient records onto statistics cards maintained by the head of the department concerned and the corresponding rates are calculated including cure rate, recuperation rate, uncured rate, mortality rate, diagnosis accuracy rate for patients in and out of hospital, and diagnosis inaccuracy rate before and after operation. Bed occupancy, turnover, and length of stay data are also calculated by departmental heads and both sets of data are forwarded on a monthly basis to the Department of Patient Record and Statistics. Financial data are provided by the Financial Division to the Department of Patient Record and Statistics each month. All these data are compiled by the Department of Patient Record and Statistics into departmental and hospital statistics.

The validity and reliability of these data have not been evaluated as part of the present research process. It appears that there are some avenues for bias to occur in the data collection process. Some caution is thus appropriate in using these data.

Data analysis

Analysis of quantitative data

The quantitative data used in this study included the data collected for the data base of managers and the quantitative data collected in the self-administered questionnaire survey.

Quantitative data entry, clean-up and analysis were undertaken in Melbourne. Data was analysed on the EpiInfo6 and in all instances statistical significance was set at the .05 level. Variables describing respondents' characteristics were cross-tabulated against hospitals and administrative positions.

Analysis of qualitative data

The qualitative data collected included responses to open ended questions on the questionnaire survey and the transcripts of interviews.

The interview transcripts were coded first. The interviews were fully transcribed, first in Chinese and then translated into English. They were reviewed repeatedly during the development of the coding framework to absorb the general patterns emerging.

A random sample of 20% of transcripts were selected for developing the coding framework. A tentative list of coding headings was drawn up based on the research model presented in Figure 3.1 and checked against a number of textbook accounts of management. The list of codes was revised accordingly and then checked against the pattern of responses emerging in the interview transcripts. This process of moving between the interviews, the text books and the coding framework was repeated several times. The coding framework was regarded as final when further application to new texts did not lead to any modifications. Each successive draft was discussed with colleagues and tested in discussion through the application of the framework to randomly selected passages of text. The remaining 80% of transcripts was then coded. The coding framework is presented in Appendix C.

The basic units of text which were coded were 'themes' of relevance to the study. Codes were assigned to passages of text on the basis of the judgement of the researcher that this block of text was mainly focused on one particular idea or line of

thought. In a small number of cases single blocks of text were assigned two different codes where the subject matter of the different codes was embedded in the same text.

Qualitative analysis of the open-ended questions on the self-administered questionnaire was undertaken after the analysis of the interview data. These data were analysed in terms which correspond to the structure of the coding framework presented in Appendix C. The first stage was to develop the coding framework for interview data and the second stage was to explore the application of the coding framework to the questionnaire responses. This involved moving between the texts, the provisional coding framework and the relevant research literature. The coding framework was modified slightly before it was used for coding the questionnaire data.

Intra-rater reliability with respect to coding was tested by recoding 20 questionnaire returns blind, six months after the original coding had been assigned. The unit of text which was coded from the survey responses was the full answer to each part question. Of 214 codable answers (160 questions) recoding produced the same result (the same code number was assigned) in over 93% of cases.

Intra-rater reliability with respect to coding the interview transcripts was tested by recoding blind three interview transcripts six months apart. Thirty nine questions produced 39 answers which included 62 coded passages. On the second run through 57 of the 62 coded passages were selected again for coding (criterion: some overlap of selected lines) and of the 57, 51 were assigned the same code (89% of cases).

Conditions for confidence

The research is based primarily on data collected from hospital managers through a self-administered questionnaire survey of 342 managers and interviews with 20 managers. I have supplemented the survey and interview data with some reference to administrative data available from the hospitals' annual reports to the provincial health bureau and documentary sources regarding provincial and national policy.

My focus is on how organisational performance is determined by competencies and by factors in the administrative and policy environment. I have approached this question in two parts: how practice is shaped by competency and environment and how outcomes are shaped by practice (see Figure 3.1).

In both the survey and the interviews the questions put to the respondents have focused closely on recent improvements, current problems and obstacles, and desired reforms. The questions were designed to encourage managers to write and talk about issues arising in their everyday practice. The questions were deliberately framed to encourage respondents to talk about issues associated with organisational performance, patterns of management practice and the policy environment in which they practise. In addition they were also asked about the knowledge and skill areas they believe they need. The questions were framed with a view to producing three levels of information: descriptive data, data upon which evaluative judgements can be based and data upon which inferences about the system relations between the five domains can be based.

The use of qualitative method in this research has strengths. As Miles and Huberman (1994) have written:

> Qualitative data are a source of well grounded, rich descriptions and explanations of processes in identifiable local contexts. With qualitative data one can preserve chronological flow, see precisely which events led to which consequences, and derive fruitful explanations. The finding from qualitative studies have a quality of 'undeniability.

I have studied the hospital management relating to organisational performance, practice, competencies and environment, and then discussed the interaction between competencies and policy from the perspective of hospital managers. The reliance on qualitative data has provided the rich text descriptions, specificity of examples and the insights into system relationships which support interpretive inferences about causality.

Obviously there are vulnerabilities associated with this approach including the lack of quantitative data (for either indicators or direct measurement of organisation performance for example), the lack of standardised measuring instruments (for evaluating competence for example), the lack of wider comparative data (limiting scope for generalisation), the lack of formally validated criteria for making value judgements about levels of excellence in outcome, practice and competence and the limited basis for drawing inferences about system relationships.

This research provides a detailed case study of one hospital system (rich text and full picture) but caution is needed in extrapolating these findings to other hospitals.

However, the hospitals included in this study have many common characteristics with teaching hospitals elsewhere in the Chinese hospital system.

The translation and communication in terms of language might be another possible limitation in interpreting these results. In general the translated questions appear to have been understood accurately. However, one instance of confusion emerged in the course of the analysis. It appears that the verb tense in the English version of Question 10 (survey questionnaire) 'have contributed' was sometimes understood by the respondents as 'would contribute'. Such misinterpretations were generally evident from a full reading of the response and appropriate cautions and corrections have been incorporated into the analysis.

This kind of confusion in translation underlines the problems involved in translating questionnaires and the importance of careful checking and rechecking. The interview schedule and survey questionnaires used in this study were in fact piloted in Chinese before the main study and a number of possible confusions were removed in the redrafting which followed this stage of the research.

The methodological provisions which I have put in place in this research provide good grounds for being confident that my findings do correspond to what is happening at least in these hospitals and that my conclusions do point to some of the dynamics driving what is happening. The key aspects of my methodology which provide grounds for this kind of confidence include: the findings produced draw upon the experience, insights and wisdom of many hospital managers whose opinions and experience warrant careful consideration; the broad sweep of the study has produced useful data across a wide range of issues and questions; the data comprise rich textual accounts of daily practice with lots of specific examples; and finally the coding framework was informed by technical understandings of the domains of the model so that I was able to retrieve passages of text which spoke to issues such as quality, efficiency and productivity.

Chapter Four

CHARACTERISTICS OF HOSPITAL MANAGERS WITHIN KUNMING MEDICAL COLLEGE SYSTEM

The demographic and professional backgrounds of managers within the KMC system, are analysed here in relation to their organisational role.

The data presented is derived from a census of all KMC staff employed as managers on or around the 30th August 1996, based on the records held in the personnel departments of each hospital. Personnel files are indexed according to government recognised personnel categories including the job category, 'manager'. All personnel files so categorised were reviewed and certain personal, professional and employment data were abstracted and entered into a separate data base for the purposes of this research. A total of 342 managers were identified and included. The findings presented are based on an analysis of this data base.

The purpose of creating the data base of KMC hospital managers was two fold. The main purpose was to provide a sampling frame for the mail survey of managers described in Chapter Three. However, the collection also provided a basis for an overall descriptive analysis of managers within the KMC hospital system. The results of the descriptive analysis are reported below.

The guiding purpose underlying the analysis was to identify features in the backgrounds of KMC managers which might influence their management competence and their patterns of management practice, and which might need to be taken into consideration in the design of training programs.

The person-specific data which are analysed include: age, gender, professional training (level and discipline) and period in management. This data is cross tabulated against appointment-specific data including employing hospital and department or section of employment and level of management appointment.

Three Affiliated Hospitals

The general distribution of hospital managers within the KMC system is shown in Table 4.1. A relatively large proportion of the managers are from the Second Affiliated Hospital (45%) although this hospital has fewer beds than the First Affiliated Hospital. The number of presidential managers in the three hospitals is quite similar. The majority of managers is at the departmental level in all three hospitals. The Third Affiliated Hospital has a smaller proportion of departmental managers and larger proportion of general administrators compared with the other two hospitals.

	Overall		PM		DM		GA	
	No	%	No	%	No	%	No	%
First Affiliated Hospital	134	39	7	5	94	70	33	25
Second Affiliated Hospital	155	45	5	3	124	77	26	20
Third Affiliated Hospital	53	16	5	9	32	61	16	30
Total	342	100	17	5	250	72	75	23

Table 4.1 Distribution of managers within KMC hospitals.

Gender and age

The age and gender of managers are provided in Table 4.2. There are slightly more female managers overall; more male managers in the First Affiliated Hospital and more women in the Second Affiliated Hospital. The presidential managers are overwhelmingly male (88%) and a larger proportion of departmental managers are female.

The average age of managers is 46 years. No presidential managers are below the age of 45 years. Fifty six percent of the managers at First Affiliated Hospital are over 50 years old; managers are younger in the Second Affiliated Hospital.

Characteristics	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Gender							
Male	46	53	41	47	88	42	53
Female	54	47	59	53	12	58	47
Age							
25 – 29	2		2	4		1	4
30 – 34	6	5	6	11		7	4
35 – 39	11	5	15	11		12	11
40 – 44	27	24	30	21		27	33
45 – 49	13	9	18	13	24	13	17
50 – 54	21	28	17	15	41	18	20
55 – 59	19	28	11	19	35	20	11
60 – 64	2	1	0.6	4		2	
Average age	46	49	43	45	52	44	45
Number of managers	**342**	**134**	**155**	**53**	**17**	**250**	**75**

Table 4.2 Distribution of gender and age of managers in the three KMC hospitals.

As shown in Figure 4.1, there is a strongly bimodal distribution of managers' age with a group peaking around 42 and a second group peaking around 52. This may be the gap between those who graduated before 1966 (in the 50-54 years age group) and those who went to medical school after 1977 (in the 40-44 years age group). The medical schools stopped admitting medical students in 1966 because of the Cultural Revolution and from 1969 to 1976 the medical schools provided medical students with a three-year training program leading to a tertiary diploma (lower than a bachelor's degree). The age gap appears to correspond to the cohort of people (now in the 45-49 year age group) who acquired only limited medical training.

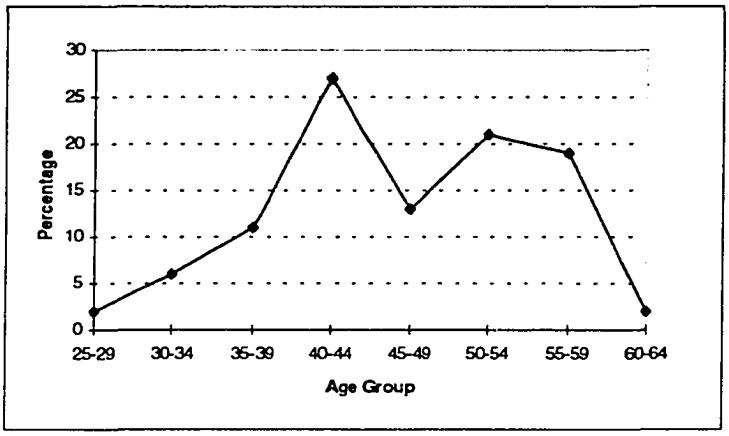

Figure 4.1 Distribution of age group of managers in KMC hospital system

Education

The most common highest educational preparation among the KMC managers is the bachelor's's degree (48%); only seven percent have a post-graduate diploma or masters degree or higher. None of the presidential managers has a higher degree (see Table 4.3).

	Overall (%)	Hospital (%)			Position (%)		
Highest education		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Vocational diploma	17	14	16	27		20	42
Tertiary diploma	24	28	22	19	24	18	27
Bachelor's degree	48	46	48	46	70	52	25
Post-graduate diploma	1		1	3		2	
Master or higher degree	6	10	5	2		8	3
No degree or diploma	4	5	5	3	6		3
Number of managers	**342**	**134**	**155**	**53**	**17**	**250**	**75**

Table 4.3 Highest education of managers within KMC hospitals.

Forty five per cent of all managers in the KMC system do not have educational qualifications higher than a tertiary diploma (four percent with no degree or diploma, 17% with a vocational diploma and 24% with tertiary diploma). Only 28% of

managers in general administrative positions have a bachelor's degree or higher. Of those administrative managers who do not have a bachelor's degree (72%) almost two thirds are managing supply departments.

The high proportion of managers who do not have a strong background in formal education presents a major challenge to both the hospitals and the individual managers.

> *There are too many people getting into our hospital without higher professional qualifications. How to arrange their work has become a heavy burden to the hospital. Our administrative staff members seriously outnumber our quota for them. The administrative departments function at a lower efficiency due to a number of incapable people. I really don't know how much work they actually do each day. (vice president)*

> *I don't even have much knowledge of fundamental aspects of how hospitals work. I feel that I may encounter great difficulties or even lose this position if I don't familiarise myself with hospital management as soon as possible. (Party secretary)*

It appears that the problem is two fold: firstly there are many managers who may not have the knowledge and skill base to carry out their duties effectively and efficiently; secondly, there are more people in certain management positions than the hospitals need.

The background to this situation concerns the sources of recruitment to these administrative positions. Of the 38% of managers in the departmental managers group who have less than bachelor's level training, most are nurses (in the vocational diploma group) or doctors with limited training acquired during the Cultural Revolution (accounting for most of those with tertiary diplomas).

Among the 72% of managers in the general administration managers group who have less than bachelor's level training there are three recognisable subgroups. These may be characterised as People's Liberation Army (PLA) retirees, graduates of the limited Cultural Revolution medical course, and people who were appointed as part of the welfare responsibility of the hospitals following the appointment of their spouses to jobs in those hospitals.

There is a further source of appointees to general administration positions who contribute to the excessive numbers of managers in this group, although in this case it is in the stratum of managers who do have bachelor's level training. These may be characterised as people returning from appointments in country areas. In the early years of the Cultural Revolution all medical graduates were sent to practise in country areas; some settled down, married local people and spent many years in rural practice. Many of this group have, later in life, sought positions in city hospitals, sometimes using relationships with people of influence to achieve such transfers. Because many of these managers have limited competence in modern hospital medicine they are often assigned to administrative roles. (These matters are discussed further in Chapters Six and Seven).

Lack of accredited management training

None of the hospital managers have degree-based management training. Some managers have attended short courses, generally dealing with developments in government health care policy.

> *In our hospitals most managers are appointed from among the medical staff. They have received very little formal management training either before or after taking their managerial positions and they all rely on their experiences accumulated through the years of working in hospitals in developing their own styles of management. (vice president)*

Professional background and status

The largest group with respect to professional background are those with a medical background (50%) followed by nursing (25%). Managers in the First Affiliated Hospital are more likely to be medically trained than those in the other hospitals. Twenty-three percent of presidential managers and 36% general administrators were originally trained in other disciplines; this group includes a large number of retired PLA officials (see Table 4.4).

Of the 58% of managers with a medical background, 60% are male; all of the managers with a nursing background are female. The large group of nursing managers

explains the predominance of women in the departmental managers category (58%, see Table 4.4); these are mainly head nurses in departmental management positions.

All the managers with a nursing background hold either a vocational (58%) or a tertiary diploma (42%).

Most of the 31 managers (nine percent of the total) whose primary training is in another discipline work as general administration managers; just over one third of these are retired PLA officials.

	Overall (%)	Hospital (%)			Position (%)		
Discipline speciality		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Medicine	58	64	55	53	77	64	34
Pharmaceutical	2	2	2	4		2	2
Medical technology	6	8	5	9		6	7
Nursing	25	21	28	23		28	21
Other	9	7	10	11	23		36
Number of managers	**342**	**134**	**155**	**53**	**17**	**250**	**75**

Table 4.4 Disciplines speciality of managers within KMC hospitals.

Forty-eight percent of managers have the status of professor (or associate professor) and 38% are employed at lecturer level. Managers of the First Affiliated Hospital are more likely to have the title of professor. Seventy six of presidential managers have a professorial title; the remaining presidential leaders (all retired PLA officials) have a title of lecturer. A large proportion of general administrators (74%) have the status of lecturer or lower, and 23% of general administrators have no professional title (see Table 4.5).

	Overall (%)	Hospital (%)			Position (%)		
Professional status[1]		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Professor	12	19	8	8	18	14	3
Associate professor	36	36	36	34	59	40	19
Lecturer	38	30	46	38	24	36	57
Assistant teacher	9	11	6	13		10	17
Other	5	4	4	7			23
Number of managers	**342**	**134**	**155**	**53**	**17**	**250**	**75**

Table 4.5 Professional title/status of managers in KMC hospitals.

Management experience

Seventy four per cent of managers have been working in management for less than 10 years. Managers in the First Affiliated Hospital have been in management for much longer (80% more than five years) than those in the other two hospitals, particularly so in comparison with managers at the Third Affiliated Hospital (over half of the managers of which have been in a managerial position for less than five years). Managers at the presidential level have considerable experience in management, over half have been in management for more than 10 years. Managers at the departmental level and administrative division have less management experience, 71% and 77% have been in management for less than 10 years respectively (see Table 4.6).

1. The professional status of managers is signified in different ways among those who are employed through the university system as distinct from those employed directly through the hospital although these two systems correspond directly to each other. For the purposes of this table these two status systems are aggregated together, for example, 'professor' in the above table includes people who are designated as 'professor' and those designated in the hospital system as 'doctor director'.

Years appointed to a managerial position	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
1- 4	34	20	41	51	6	33	37
5 – 9	40	49	38	25	43	38	40
10 – 14	18	25	14	11	39	17	16
15 – 19	5	6	4	8	12	10	3
20 – 24	2		3	2		2	3
25 and over	0.5			4		0.4	1
Number of managers	**342**	**134**	**155**	**53**	**17**	**250**	**75**

Table 4.6 Years appointed to a managerial position.

Of the 34% of the total group who have been managing for less than five years, 82% are aged 40-44. Of the 40% of the total who have been managing for between five and nine years, 67% are aged 50-54. All managers who have been in management for more than 10 years are over 50 years of age.

Conclusions

This chapter examines the professional and career backgrounds of managers in three Chinese teaching hospitals. The analysis reported was directed to identifying patterns in their backgrounds which might be significant in terms of shaping management competencies, patterns of practice, organisational performance and training needs.

There are more men in senior administrative positions in hospitals. This finding is consistent with the results of other research conducted both in Australia and China. A study of women in hospital management in Australia conducted by Thiessen (1996) indicated that 76% of all employees in the health sector were female. Women filled 42% of management positions but only nine per cent of chief executive positions in Victorian public hospitals. According to Thiessen, the barriers preventing women attaining positions in management and moving up organisational hierarchies were: structural barriers including the legislative context and the health labour market;

organisational barriers including gender stereotyping, executive culture and occupational segmentation; and personal factors including women's careers and family responsibility. It is a general pattern in China also that men occupy senior administrative positions more commonly than do women. Stewart and Chong (Stewart and Chong, 1991) examined the characteristics of top managers in 17 different Chinese enterprises; 92% of the 26 senior managers studied were men.

Managers' age may be an important determinant of management competency. In examining the relationship between administrator characteristics and strategic activities in hospitals, Mick, Morlock, and Salkever (1993) found that younger administrators (under 40 years of age) were more likely to have managed hospitals that formed part of multihospital systems and consortia. Older administrators (over 50 years of age) were less likely to have engaged in any of these strategies. These authors conclude that as a general rule, younger managers are likely to be more flexible and better able to work effectively in new circumstances and to have a better sense of strategy.

The average age of managers is 46 in these hospitals although the age distribution is bimodal with peaks in the age groups 40-44 and 50-54. Most managers aged 40-44 have been in management for only two years (appointed in 1993), and most managers in the age 50-54 have been in their position for about seven years (appointed in 1988). The findings may suggest that managers within the KMC hospital system are appointed at a relatively older age. Although we have no direct data to explain why there are fewer managers in the age group 45-49, it appears that there was a period between 1988 and 1993 during which relatively few managers were appointed. This might be worth researching in the future.

The data presented in this chapter point towards a complex of problems, particularly affecting the general administration field (finance, personnel, supply, etc), which would include: an excess of managers and a significant proportion of managers who have relatively limited educational preparation for the management challenges they are facing and in some cases little or no experience in the health field. As indicated above, many of these managers may have been directed into management because they are not qualified to work in clinical areas rather than through their own direct choice. Many of the interviewees spoke of these issues and the background data analysed in

this chapter is consistent with their opinions. However, the evidence which might confirm this putative set of problems is limited at this stage.

This apparent set of problems (overstaffing, low level initial training, lack of health experience and perhaps lack of aptitude for management) interacts with the broader problem of lack of specialist management training. None of the 342 managers surveyed has had accredited specialist management training.

Issues to carry forward

A number of issues have emerged in this chapter which are relevant to the broader enquiry guiding this research and discussed in detail in Chapter Three. It appears that there is a pool of managerial talent (namely women managers) which is being neglected. It is unlikely that the fact that there are only two women managers at presidential level (out of 17) is a correct reflection of the distribution of managerial talent.

It appears that very few people are being inducted into management before the age of 40. People are moved into management positions at a relatively senior stage of their careers, without having acquired any management training or experience. This is not how people are prepared for practice in surgery or radiology or any other clinical speciality.

There appears to be a complexity of problems in general administration including overstaffing, low level of initial training, lack of health experience and perhaps lack of aptitude for management. This set of problems (if confirmed on closer research) is likely to contribute to poor coordination and inefficiency.

The absence of management training in Yunnan is reflected in the fact that none of the managers surveyed for this analysis has formal management education. I will return to these issues in later chapters.

Chapter Five

HOSPITAL PERFORMANCE

From this chapter onwards I present the main findings from the analysis of the questionnaire survey and interviews. In this chapter I focus on the findings with respect to hospital performance.

Hospital performance has been analysed (for coding and presentation of findings) in terms of two broad aspects: delivery of hospital care and organisational development. 'Delivery of hospital care' comprises quality of care, technical efficiency and productivity, and access and allocative efficiency. Organisational development comprises enhancement in people, buildings and amenities, equipment and supply and revenue.

The first part of the chapter provides a general overview of the data elicited through the survey and the interviews, upon which my evaluation of hospital performance has been based; the second presents more discussion of the specific elements comprising 'hospital performance'; this is followed by the conclusions which can be drawn.

Overview of findings with respect to organisational performance

Recent improvements in hospital management

Respondents were asked to list up to three improvements in the ways their hospitals are run which have been introduced over the last five years (Survey Question 12). Most, but not all respondents provided three; many listed four and a few cited five. There was a total of 929 individual responses which were coded and grouped within three broad categories under the headings of 'performance', 'practice' and 'environment'[1].

1. See Chapter Six for a more detailed analysis of the 'practice' codes and Chapter Eight for the 'environment' codes.

Responses were coded as 'performance' when they spoke primarily about what had been *achieved* (the outcomes of management practice) or when they spoke about code headings which were defined within 'performance' such as 'efficiency' or 'quality of care' or 'enhancement of staff or buildings'. (See further discussion in Chapter Three.)

There were 296 responses (coming from 48% of the total 242 respondents) which were coded as 'performance' and these were further analysed within the six code headings shown in Table 5.1. The data in the table are expressed as a percentage of the number of respondents in each hospital and position category whose answers were coded under the applicable category. The table indicates the percentage of respondents who mentioned improvements within each of these areas of performance. The percentages are calculated on the basis of the total set of 242 respondents.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any improvements in performance	**48**	**57**	**46**	**29**	**85**	**48**	**38**
Delivery of hospital care							
Efficiency (including productivity)	30	41	27	13	62	30	22
Quality of care (including access)	22	21	26	16	31	23	17
Organisational development							
Enhancement in revenue	33	45	28	21	38	36	26
Enhancement in people	13	12	14	13	31	12	12
Enhancement in building and amenities	12	9	12	21	8	9	19
Enhancement in equipment	9	5	6	26	15	8	10
Non-respondents to this question	5	4	3	10	8	4	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 5.1 Recent improvements in hospital performance, overall and by hospital and administrative position (Survey Q12). The total number of respondents is greater than the number of respondents because the question asked for three instances of recent improvements.

Examples of improvements in hospital efficiency were common. Thirty percent of managers cited improvements which were coded as 'improvements in efficiency'; especially from the First Affiliated Hospital and among the presidential managers.

Enhancement of revenue was the most common category of improvement mentioned by 33% of the survey respondents, especially from the First Affiliated Hospital and among the presidential and departmental managers. Enhancement in equipment and supply was given a relatively stronger emphasis by respondents from the Third Affiliated Hospital in comparison with the other two hospitals.

Managers participating in the interviews were also asked about improvements (Question 9) and deteriorations in the way the hospital operates (Question 10). A total of 81 responses were coded as improvements and 30 responses were coded as deteriorations. Answers to these questions were coded under three of the first level headings of the coding framework, namely, 'performance', 'practice' and 'environment'. There were 45 responses coded under 'performance'; 34 improvements (coming from all of the 20 interviewees) and 11 deteriorations (coming from 40% of the 20 interviewees). The number and proportions of the 20 interviewees mentioning improvements and deteriorations within 'performance' code heading are listed in Table 5.2.

	Improvements		Deteriorations	
	No	%	No	%
Interviewees mentioning any improvements of hospital performance	**20**	**100**	**8**	**40**
Delivery of hospital care				
Efficiency	9	45	5	25
Quality of care	5	25	6	30
Organisational development				
Enhancement in revenue	11	55		
Enhancement in people	4	20		
Enhancement in building and amenities	3	15		
Enhancement in equipment and supply	2	10		
Number of coded passages	**34**		**11**	

Table 5.2 Aspects of hospital performance tabulated against the number of responses mentioning such improvements or deteriorations and the proportions of respondents who mentioned improvements and deteriorations in these areas of performance. (Q9 and 10 from interviews)

The results suggest that improvements in efficiency outweigh deteriorations although the picture is mixed. The number of people citing instances of 'deteriorations' which were categorised as 'quality' (6) was slightly greater than the number citing instances of 'improvements' categorised as quality (5).

Enhancement in revenue was the most common category of improvement (over 50 percent). Enhancements in people, buildings and amenities as well as equipment and supplies were referred to by some interviewees.

Frustrations, difficulties and problem areas in the managerial position

Questionnaire survey respondents were asked to list up to three of their 'greatest frustrations, difficulties and problem areas' in their present position (Question 17). Most respondents made at least one, a large number two and some three or more responses. There were 715 responses to this question which were coded under the headings of 'performance', 'practice', 'competency'[2] and 'environment'.

2. See Chapter Seven for a more detailed analysis of the 'competency' codes.

There were 69 comments (from 59 respondents, 24% of the total) which spoke of frustrations and difficulties in relation to hospital 'performance', all of which dealt in one way or another with the efficiency of the hospital. The proportion of respondents mentioning difficulties and frustrations coded as 'efficiency' was fairly uniform across the hospitals and positions with the exception of the 'general administrators' who cited efficiency issues less frequently (17% cited such difficulties).

Interviewees were also asked to identify 'some of the most difficult issues facing you personally with respect to the management responsibility of your job' (Question 3). There was a total of 73 coded comments elicited by this question which were categorised under the headings of 'performance', 'practice', 'competency' and 'environment'. Nine responses to this question (from 45% of the 20 interviewees) were coded under the general heading of 'performance'. These are discussed in more detail below.

Specific areas of hospital performance

Hospital efficiency

In approaching the data collection for this study and the analysis of the data I have been mindful of the theoretical analyses of efficiency referred to in Chapter Three, in particular, the notions of technical and allocative efficiency and productivity.

However, the statistical data available from the KMC hospital system is limited and does not lend itself to formal measures of this sort. It was partly for this reason that this present research was based on the collection of qualitative data directly from hospital managers and the use of this data to derive an indirect picture of hospital performance, including efficiency.

The analytic categories which have been used to analyse the survey and interview data ('increased turnover and shortening length of stay', 'in/efficient use of resources', 'inefficient allocation of resources' and 'inefficiency of administrative departments') reflect a kind of compromise between a theoretically determined categorisation and a recognition of the issues of efficiency as spoken of by the informants.

In speaking about improvements in hospital operations 30% of the total respondents in the questionnaire survey (73 managers) indicated that hospital efficiency has been improved in recent years (see Table 5.1). The examples of improved hospital efficiency were further categorised under the headings listed in Table 5.3. Almost all of these examples related to technical (rather than allocative) efficiency.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any improvements in efficiency	**30**	**41**	**27**	**13**	**62**	**30**	**22**
Increase of bed turnover and shortening of length of stay	19	27	18		23	20	12
Efficient use of resources[3]	13	14	12	13	38	12	10
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 5.3 Improvements of hospital efficiency over the last few years. The table indicates the percentage of the questionnaire respondents who mentioned improvements which were coded as performance'/'improved efficiency' and sub-categorised as shown (73 respondents).

Fifty nine respondents (24%) cited frustrations and difficulties with respect to hospital efficiency as among the major problem areas faced in their management roles (see Table 5.4). These problems were coded under the headings listed in the table: inefficient allocation of resources, inefficient use of resources and inefficiencies in administrative departments.

3. The kinds of responses to Q12 (improvements in hospital administration) which were coded as improved performance / *efficient use of resources* are exemplified by: 'every department tries to fully use their equipment and the work efficiency is increased'; 'we increased our revenue by using hospital equipment more efficiently'; 'the expensive equipment in our hospital has been used more and economic efficiency has also increased'.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any problems of efficiency	**24**	**22**	**26**	**26**	**23**	**27**	**17**
Inefficient allocation of resources[4]	12	12	13	11	15	13	9
Inefficient use of resources[5]	9	10	10	8	15	9	7
Inefficiencies in administrative departments[6]	7	5	6	13		8	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 5.4 Frustrations, difficulties and problems in hospital efficiency tabulated against the proportions of the respondents in each respondent category who mentioned frustrations which coded as 'hospital performance'/'inefficiency' (59 respondents).

Increase in bed turnover and shortening length of stay

Nineteen percent of the questionnaire survey respondents reported increases in bed occupancy rates and shortening of the average length of stay as reflecting improvements in hospital efficiency[7]. Almost all of the respondents who responded to

4. The kinds of responses to Q 17 (frustrations and difficulties in managerial positions) which were coded as *inefficient allocation of resources* are exemplified by: 'the distribution of medical professionals and equipment in our hospital is problematic'; 'the hospital leadership should further consider the proper allocation of hospital resources'; 'it is hard for departmental managers to improve quality of care and work efficiency in their departments because of the lack of clinicians'.

5. The kinds of responses to Q 17 (frustrations and difficulties in managerial positions) which were coded as *inefficient use of resources* are exemplified by: 'the use of medical tests and medicines in our hospital is inefficient'; 'the cost of medications in our hospital is very high and also patient caseload is very heavy'; 'in order to generate more revenue from patients, some doctors asked patients to have expensive medical checks even though they did not need to'; 'in some departments new equipment is just used for a short period, it is a waste of hospital resources'.

6. The kinds of responses to Q 17 (frustrations and difficulties in managerial positions) which were coded as *inefficiencies in administrative departments* are exemplified by: 'the work efficiency in the administrative section is very low'; 'some administrative staff need to study more about what management is to increase their work efficiency'; 'many administrators don't know how to serve the clinical departments. We often have to wait for a long time to get a simple thing done'; 'the administrative sections should know their responsibilities clearly, so that they can support the clinical departments more effectively'.

7. The proposition that shorter hospital stay and higher bed occupancy rates does reflect greater technical efficiency, while customary and plausible, needs to be subject to formal health economic evaluation in the specific context referred to.

Question 12 (which asked about improvements) reported that bed occupancy and patient turnover have increased, while the length of stay has shortened in every department of their hospitals. Managers indicated that this improvement was largely a consequence of the contract managerial responsibility system (CMRS, to be discussed further in Chapter Six).

Under the CMRS, the responsibility for quality and efficiency of the department's work and for revenue lies with the head of the department. Enhancing efficiency and revenue is done mainly through shortening length of stay and increasing bed turnover. Several presidential respondents argued that these are key measures of work efficiency. They indicated that all of their departments are now trying to attract more patients. They are concerned that if the beds are vacant, then there will be no profits.

Managers from all of the hospitals stated that they have paid a lot of attention to bed turnover. One presidential respondent indicated that the standard length of stay stipulated by the Provincial Health Bureau for a hospital of that category was 23 days in 1995 but the average length of stay for his hospital was 21 days.

An illustration of the focus on turnover was provided by a manager from a psychiatry department. (This is a newly-established department; the outpatient service started in 1992, and inpatient building, which was build in 1993, has 22 beds.) The manager reported that the outpatient attendance of this department is increasing every year, to the present level of 600 attendances per month (an increase of 17% compared with last year). In 1995, the department's average length of stay was 69 days and in 1996 it was 49 days. The department has reached the target set in its contract with the president of less than 55 days. "This is rare in the whole country. That means more than 2000 extra inpatients could be treated in our department per year and it is equal to functioning of a new medium-sized hospital." He compared these figures with those of a larger specialist mental hospital which has several hundred more beds but an outpatient attendance rate which is less than his department.

The head of a cardiology department reported that in the last three years, the average length of stay in his department has reduced by three to five days. The bed occupancy rate is 100%.

If we prolong the average length of stay, then we suffer loss since our inpatients only take medicines and also some facilities are not fully used. This would affect our hospital's profits, and it keeps other patients waiting. (departmental head)

The head of a neurology department also spoke about increased bed occupancy and turnover and reduction in average length of inpatient stay.

The hospital stipulates 28 days as the average length of stay, but now we only have 21 to 22 days. Accordingly, our work efficiency is higher, to the satisfaction of our patients. (departmental head)

Two interviewees, however, indicated that there is still scope for improving their hospitals' efficiency in relation to the length of stay. They commented that the average length of stay is 12 to 15 days in some advanced hospitals in China, but over 20 days in their hospitals. According to these managers the work efficiency of the diagnostic investigation departments is a major reason for this.

Usually, it takes 2-3 days to do a blood test for one patient. Sometimes when the patient is discharged from the hospital, the test has not been done yet. (departmental head)

Efficient use of resources

Thirty one respondents (13% of respondents) argued that the fuller use of expensive equipment and establishment and perfecting of administrative systems are important approaches to improving efficiency in their hospitals.

Several managers spoke about earlier practices under which some diagnostic departments only ran certain tests once per week. The medical equipment was not used properly and patients were kept waiting and this affected the efficiency of diagnosis. Now many checks are done on the same day that the request is received by the department. For example, one manager described how the computerised tomography (CT) service initially operated for only half of each day and patients had to wait for three or four days to get a CT check. Now this service is open for all day, from 8am to 8pm, which means that patients can have a CT check on the same day the request is made.

This makes full use of the hospital's equipment as well as increasing the hospital's profits and satisfying patients. (president)

The efficiency of operation scheduling has also been increased in several hospitals according to the interviewees. One manager described how in the past, there had been no more than one operation in some theatres per day. Now the number of operations has been increased which means two or three successive operations in one theatre per day. The medical and nursing staff are now working more efficiently. The work load has at least doubled compared with that of the past. A manager from one anaesthesiology department reported that previously, one anaesthetist might only administer one anaesthetic per day. Now he/she can often do three. The total number of anaesthetics administered by that department was previously only around seven per day but it has now reached about 20.

Improvements in interdepartmental relations have also contributed to the more efficient use of resources. In the past, according to several informants, conflict was common between the operation room staff and the staff of surgical departments and between the staff of the operation suite and the supply department (which supplies operating facilities and materials). This conflict affected the scheduling of operations and resulted in inefficient use and underutilisation of resources. The hospitals have introduced some measures to reduce conflict, such as setting up a linkage between work efficiency and bonus distribution to improve work incentives (details will be discussed in Chapter Six). Interviewees argued that, as a result of these and other measures, co-operation between these departments has been improved and patients can now have their operations promptly (resulting in improved patient satisfaction).

Methods such as these are proving effective in increasing patient turnover and shortening the average length of stay with the consequence that the revenue is increased and patients are more satisfied.

Inefficient allocation of resources

Over 12% of the total respondents identified problems in resource allocation as being among the major problem areas that they are facing in their managerial positions (see Table 5.4). The managers' responses suggest that allocative inefficiency is a significant problem in the hospital system.

Policies which encourage the establishment of competing specialist units and the duplication of expensive equipment

Many managers spoke about the ways in which resource allocation to hospitals, departments and staff categories can sometimes be distorted by government policies and the internal policies of the hospitals. Two managers from one of these hospitals were critical of the way government policies which encourage hospitals to compete to be classified at level 3-A (see hospital accreditation in Chapter Two) can encourage the duplication of specialist capacity. There is one specialised hospital in Kunming for treating tumours, but under policies current at the time of this research the hospital categorisation policies of the Provincial Health Bureau appear to encourage competition among the hospitals in the development of specialist units. The Bureau requires that, to be categorised as a level 3-A hospital, hospitals should have an oncology department, thus encouraging hospitals to develop their own oncology departments (including the purchase of related equipment, such as the linear accelerator, CT and MRI) regardless of whether this is an efficient use of resources overall.

These managers argued that their hospital, which is the only specialist oncology hospital in the province has the capacity to treat all of the more specialist cases being treated in the oncology units of the general 3-A hospitals and that this constitutes duplication of facilities.

> *If it is true that the oncology hospital cannot treat such numbers of patients and cannot meet the requirements, then it would be necessary to set up the oncology department in each hospital. But that is not the case. (vice president)*

Some managers from another hospital were also critical of the pressures on hospitals to compete to be classified level 3-A hospitals, arguing that this competition encourages hospitals to establish units and acquire equipment for the sake of the competition rather than because of need. They suggested that when the second round of competition for classifying hospitals as 3-A hospital by the Provincial Health Bureau is about to start, many hospitals feel compelled to invest in new developments such as opening a dental department, an infectious diseases department and/or purchasing large

scale equipment (such as CT, MRI). There are also large costs associated with reorganising medical professionals to staff such new units. In some situations hospitals may have insufficient funds to develop necessary programs and ensure high-quality medical care because of the lack of clinical staff.

The managers emphasised that hospitals should develop specialist units and acquire expensive equipment to meet real needs rather than duplicating facilities.

> *Half of the ward in the dental surgical department of the ... hospital is empty all the year, but that in the First Affiliated Hospital is on the contrary strong in this area. The ... hospital needs doctors, nurses, equipment for those new departments, but has no patients. The ... hospital could improve its efficiency by using the limited resources more reasonably. (departmental head)*

> *It seems that most investment will be allocated only for the 3-A competition. Actually, the hospital is reluctantly pushed by state regulations. If the title of 3-A is cancelled, the allocation of government investment will be reduced, thus affecting the hospital's reputation. But it is also possible that the hospital will still lose even spending lots of money on it. (general administrator)*

Some managers commented that certain items of equipment in their hospital are left unused and so are the related staff members. They suggested that the hospital should allocate equipment to departments to maximise their utilisation. For instance, one manager mentioned one department and stated that the utilisation of equipment in that department is very low. Many facilities are only operated by a few doctors and are not often used. In fact, he argued many diseases treated by other departments overlap with those treated in that department. In such cases, it would be beneficial to all patients to use the facilities of one department for medical checks rather than to equip every department with the same facilities.

Allocation of medical professionals

It appears that some departments in these hospitals are facing the problem of insufficient clinical staff. This may be due more to an inefficient distribution of clinical professionals than an overall problem of under supply. Many managers argued that

there is an imbalance between beds and doctors and nurses due to a flow of clinicians to unproductive posts. Several managers pointed out that the majority of administrators in the hospitals' administrative departments are trained as doctors and nurses and this contributes to the insufficiency of clinical staff.

Another problem which several managers mentioned is that some appointments to hospitals and even to individual departments are made as a consequence of personal relationships[8]. Departments which have good economic profits (such as the Haematology and Nephrology Departments and the Cardiac Surgery Department) tend to have an excess of staff. On the other hand many staff are reluctant to take appointments in departments which have low profits (and low bonuses) and heavy workloads of teaching and emergency treatment such as the Paediatrics Department and the Emergency Department.

Several managers complained about the increasing numbers of staff employed in the administrative and supply departments in recent years. It was stated that these departments have more people than before but their work efficiency is not high.

> *In the current competitive environment efficiency is very important. ... In the administrative sections there are jobs which can be done by one person but there are three persons there to do the work. People idle away the time. (departmental head)*

Inappropriate allocation of personnel across different shifts also causes inefficient utilisation of medical professionals. Some interviewees cited departments that have a relatively large staff (over the quota set by the Provincial Health Bureau) yet still lack hands when it comes to actual work.

One manager described how a nurse, working in one of the more attractive departments, was sometimes rostered for work for only three shifts per week (a day shift (8:00am - 4:00pm) on Saturday, a night shift (1:30pm - 8:30am) on Sunday, and then an evening shift (5:30pm - 1:30am) on Tuesday. For the rest of the time she was free (although on full pay).

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8. *Guanxi* and other aspects of personnel practice and policy are discussed in Chapter Six and Eight.

Several departmental managers mentioned poor coordination between clinical departments and diagnostic departments as contributing to less than efficient use of resources. From one of the hospitals an example concerning the taking and testing of blood for liver tests was provided. It is usual practice in this hospital to order a set of 10 specific items to be tested when assessing liver function. However, one of these items is only tested by the department of laboratory analysis on Mondays, Wednesdays and Fridays. Because of this the department has told the clinical departments that it only accepts samples for this full selection of tests on Monday, Wednesday and Friday. This restriction leads to delays in diagnosis and treatment. On the days for taking blood samples the nurses in the clinical departments are busy but on Tuesday, Thursday and Saturday they have much less to do. According to the managers the length of stay of many patients is lengthened by 2-3 days because of this problem.

The manager of a surgical department told how every Thursday the nurses in all the departments in his hospital have to calculate all the medicine that the patients will need during Saturday and Sunday because on these two days the pharmacy and the accountant do not work. In fact, many patients' clinical conditions are changing all the time. He spoke of one patient who was improving on Friday and since his medicine was very expensive the doctor wanted to stop the use of the medicine. However, the medicine had been prescribed on Thursday and was already recorded by the accountant. Therefore it could not be stopped. In contrast, in some cases, medicines might not be available at the weekend.

> *Such things probably could be avoided by adding two or three staff on Saturday and Sunday serving the whole hospital. (departmental head)*

Some managers argued that these problems reflected weaknesses in the management of personnel in the hospital generally.

> *The personnel office is not only in charge of salary distribution and personnel transfer; it is also supposed to supervise the proper use and allotment of the whole hospital's manpower to avoid waste of personnel resource. (general administrator)*

Inefficient use of resources

Nine percent of the respondents gave examples of inefficiency in their hospitals involving the excessive use of hospital resources (see Table 5.4). Several informants described situations in which different departments had bought similar equipment, in competition with each other, in the hope of increasing their revenue by giving more medical checks to patients. This had proved to be a waste of money. In some departments new equipment had been used for only a few medical checks and only operated by a few doctors and then stayed unused. "Such inefficient usage of facilities is a great waste of the hospital's resources." (departmental head)

Some managers were also concerned about the total expenditure on medicines and the large proportion of hospital expenditure that this represents. They cited this as one aspect of managerial inefficiency. Table 5.5 shows the total revenue and the cost of medicines, in absolute terms and as a proportion of total revenue in the three affiliated hospitals of Kunming Medical College from 1993 to 1995.

Years	Total expenditure	Expenditure of medicine	Expenditure of medicine to total expenditure (%)
1993	52.4	21.9	41.8
1994	93.3	46.4	49.7
1995	128.0	66.3	51.8

Table 5.5 Total expenditure and the expenditure of medicines (absolute and relative to total expenditure) at the hospital of KMC system from 1993 to 1995 (million yuan). Data provided by the department of patient record and statistics of hospital.

Whilst the hospitals' gross revenue increased significantly over the period 1993-1995, an increasing proportion of this was spent on medicines; from 41.2% in 1993 to 51.8% of total expenditure across the three hospitals in 1995.

Hospitals gain some revenue from the sale of medicines but whereas retail prices are controlled by government policy, the wholesale prices paid to pharmaceutical suppliers which are in the market sector are not subject to price controls. Several informants emphasised that while expenditure on medicines is a large and increasing component of hospitals' expenditure, because of the price controls, profit on the sale of medicines makes only a slim contribution to total hospital revenue.

The hospital only earns the difference between wholesale and retail prices. In other words, the hospital just makes a profit for the pharmaceutical factories and companies using the hospital's own resources. (general administrator)

Inefficiencies in administrative department

In speaking about the problems of inefficiency in their hospitals around seven percent of survey respondents (see Table 5.4) indicated that their hospitals needed to improve the efficiency of their administrative departments.

Many departmental managers complained that they often have to go around many times for a verified document to be signed and often cannot find the right person or the document is delayed for a long time before it is finally signed. One head of department reported that if a department needs a slide projector, the head has to write a report first, then hand it up to the hospital president to be verified. Then it goes to the equipment division.

I have to put all the other work in the department away for the time being and go from here to there. Sometimes it is very hard to catch the president in one time. It took a lot of time for me. (departmental head)

The manager believed that if the report could be given to the equipment division directly, then the division took the responsibility to find the president to have it verified, it would be more efficient than the department head doing so.

It is clear that delays cause frustrations and some of the clinicians spoke critically of the administrative departments:

Some work can be done within three days, but they delay doing it for 10 days or even half a month. The administrative departments should really serve the clinical front line and not play these bureaucratic crafts. (department head)

The administrative sections are not aware of their own responsibilities. The medical affairs office, for instance, is busy solving medical accidents and disputes instead of supervising medical care quality. They have no time to give thought to the question of quality of care. (department head)

Quality of care

Quality is a difficult concept to define. In general it relates to the clinician's and patient's perception that care was of a high standard and resulted in desirable performance (The National Health Ministers' Working Group, 1996). This section presents findings related to the clinical processes of care and the patient's perception of quality of care. It is based on indirect evidence rather than direct measurement of technical indicators of quality.

In speaking about improvements in the way the hospital is run 22% of total respondents in the questionnaire survey cited improvements which were coded under the heading of 'performance' (see Table 5.1). Within this group (respondents mentioning improvements in 'performance'), 15% of respondents referred to improvements in technical indicators of quality and 10% of respondents referred to improvements in patient satisfaction (see Table 5.6).

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any improvements in quality of care	**22**	**21**	**26**	**16**	**31**	**23**	**17**
Technical indicators	15	17	16	11	31	17	7
Patient satisfaction[9]	10	8	12	8	15	9	10
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 5.6 Improvements of quality of care over the last few years. The table indicates the percentage of respondents who mentioned two types of improvements in quality within the coding category of 'performance'/'quality of care'.

Five interviewees (25%) mentioned improvement in quality of care as an important aspect of the improvements taking place in their hospitals, including improved technical indicators of quality and patient satisfaction. Six interviewees

9. The kinds of responses to Q 17 (frustration and difficulties) which were coded as *'performance' / 'patient satisfaction'* are exemplified by: 'under the CMRS, medical staff service manner has improved and patient satisfaction also is improved'; 'patients are more satisfied with our medical services, especially the shortening of waiting time for medical tests'; 'we tried to improve patient satisfaction by providing a high quality nursing service'; 'many patients coming to our hospital for medical treatment are satisfied with the quality of care'.

(30%) spoke of deterioration in relation to quality of care, including issues of service manner, patient satisfaction, utilisation of hospital facilities and medical accidents.

Technical indicators of quality

Technical indicators of quality of care relate to the clinical processes of care and outcomes of care. The hospitals in our sample use a number of technical indicators of quality, including 'inpatient cure rate', 'recuperation rate', 'uncured rate', 'mortality rate', 'diagnosis accuracy rate (for patient in and out of hospitals)' and 'diagnosis inaccuracy rate (before and after operation)'[10].

Fifteen percent of survey respondents and five interviewees quoted the data provided in the hospitals' annual statistics as showing that the quality of care of their hospital has been improved. Table 5.7 and Table 5.8 show these indicators of quality for two hospitals from 1992 to 1995. (The data are not available for one of the hospitals).

Indicators of quality[11]	Years (%)			
	1995	1994	1993	1992
Cure rate	62.8	66.0	67.7	69.1
Recuperation rate	30.5	27.1	25.2	24.1
Uncured rate	4.2	2.4	4.2	
Mortality rate	2.5	2.5	2.9	3.8
Diagnosis accuracy rate for patient in and out of hospital	99.8	99.7	99.8	99.6
Diagnosis inaccuracy rate pre- and after operation	0.06	0.2	0.2	0.4

Table 5.7 Indicators of quality of care in one hospital (1992 - 1995). Data provided by department of patient record and statistics of hospital.

10. The data on which these indicators are based are generated at the point of discharge when medical staff complete a statistics card which includes questions about cure, recuperation and whether the admission diagnosis was confirmed at operation. These cards are forwarded to the Statistics Department and the data are compiled into departmental and hospital statistics on a monthly and annual basis.

11. These statistics are compiled monthly by the statistics department of each hospital, based on the returns provided by departmental heads. Protocols are published by the Provincial Bureau for the collection of these data and the calculation of the various indices.

Indicators of quality	Years (%)			
	1995	1994	1993	1992
Cure rate	59.0	59.4	60.1	63.7
Recuperation rate	36.2	35.2	35.3	31.6
Uncured rate	2.3	2.6	2.2	2.4
Mortality rate	2.5	2.5	2.4	2.4
Diagnosis accuracy rate for patient in and out of hospital	99.5	99.6	99.4	99.6
Diagnosis inaccuracy rate pre- and after operation	0.07			0.3

Table 5.8 Indicators of quality of care in another hospital (1992 - 1995). Data provided by department of patient record and statistics of hospital.

The data in these tables do not show a clear trend towards improvement in quality. Quality is a complex idea and not adequately encompassed by these summary indicators.

All public hospitals in Yunnan are required to measure their quality of care using these indicators. The indicators and protocols for data collection are specified by the Provincial Health Bureau in Yunnan. The indicators are considered in target setting and the distribution of bonuses under the CMRS and for reporting, at an aggregate level, by the Provincial Bureau to Beijing.

Notwithstanding the fact that 15% of survey respondents and 25% of interviewees cited these data there is some scepticism among other managers regarding the validity of this data. Further inquiries suggest that the data collection is not subject to very tight quality control and there is some discretion (with respect to interpretation of 'cure', 'recuperation') available to the staff completing the forms at the time of discharge.

Medical accidents and disputes

The increasing frequency of medical accidents[12] was of concern to several interviewees. Managers claimed that medical accidents and disputes associated with

12. The term 'medical accident' is used in this thesis to refer to adverse consequences of medical and other services, sometimes referred to as 'medical misadventure'. The term 'medical accident'

patient grievances[13] have increased in one of the hospitals studied in recent years. As a result, high compensation payments were made by the hospital and the damage to the hospital's image was huge.

Managers variously attributed the increasing frequency of medical accidents to: a weakening sense of responsibility on the part of medical staff at all levels; an over-emphasis on revenue; incentive structures which do not reward good practice (nor penalise poor practice); an incomplete supervision and checking system; and a blurred division of responsibilities.

To solve the many patient grievance disputes that the hospital has, managers suggested that the hospital should develop a comprehensive strategy, including upgrading the technical levels of expertise among medical staff, strengthening medical ethics education among staff and improving the quality of management generally.

Interviewees spoke of another hospital where considerable attention has been paid to ensure high quality medical care and avoiding medical accidents and patient grievance disputes. Managers from one of the hospitals commented that in previous years it was common to have several big patient grievance disputes each year but since turning increased attention to the problem the frequency and severity of such disputes have been reduced. There have been no serious medical accidents in this hospital in the last year.

> *These years, we do not have the same legal issues as the other teaching and provincial hospitals. In the community our hospital has good standing. (Party secretary)*

Two departmental managers reported that they have strengthened management control of medical and nursing quality in their departments. They reported that, as a consequence of their efforts, these departments have not had one single medical dispute or accident for several years. The manager from one anaesthesiology department

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corresponds to Chinese usage.

13. In the region where this research was carried out there is very little involvement of specialist insurance companies in indemnifying hospitals and other providers against litigation. Accordingly the process of negotiating, conciliating and in some cases proceeding to court for compensation is one that involves the hospital staff much more directly than in systems where the lawyers and insurance companies are more involved.

reported that other hospitals' anaesthesiology departments have applied for medical accidents insurance but his department has decided not to do so. The managers of this department have promised the president of the hospital that no medical accident will occur in their department (except for the unavoidable ones). Since 1993, the department's anaesthetic accident number is close to zero.

> *If the Anaesthesiology Department of the xx hospital cannot guarantee its medical care quality and has to buy insurance out of fear of medical accidents, then all they should do is close down. (departmental head)*

Service manner

Many managers indicated that the problem of the poor service manners on the part of medical staff is still confronting their hospitals and has affected the service quality. They argued that a poor service manner has resulted in an increase in disputes in their hospitals.

Two managers reported that recently in an emergency department there have been several medical disputes which were partly related to service manners. One of the cases occurred when a critically ill patient came to the department, and although the department sought appropriate treatment from relevant departments this was time consuming and the patient died. Because the department did not explain this to the family, they believed that the deaths were caused by the doctors' delay. "If we had been better in our manners toward them, they might not have had such serious complaints." (head nurse).

> *The hospital cannot hope to work any better to achieve any more, or progress any faster unless we have improved quality of patient care, which in turn requires a strengthening of medical services, including a change of attitude towards patients, regarding them as our own loved ones. (president)*

It seems that evaluating the staff's attitudes toward patients is currently a difficult challenge in the hospitals. Many managers commented on the causes of bad poor service manners. They acknowledged that the attitude of many medical staff needs to be improved, but they also pointed out the medical staff, are carrying very heavy work loads and the pressures on them are also heavy.

Three hundred outpatient cases are seen every day at one department, which is about 80 patients for each doctor daily. When a doctor has to diagnose such a huge amount of outpatients per day, he/she cannot force out good manners. Sometimes, doctors may lose their temper because of the heavy work, so patients may not be satisfied. (departmental head)

A nurse in a paediatric department has to give 30 to 40 infusions in one morning, with questions from children's parents pestering her all the time. How can you expect her to give a smiling service? (general administrator)

These hospitals have started to stress the importance of service manners. But conflict between medical staff and patients are still common. Managers are asking how to tackle the relations between medical staff and patients and how to improve service quality despite the huge amount of work for doctors and nurses.

A nurse was giving intravenous drips to patients. She had to do it one by one for patients in sequence. One patient in the queue got tired of waiting and hit her. (general administrator)

Several managers also pointed to the very low salaries which hospital staff receive compared with some other service trades in China or with their overseas counterparts. This is seen as contributing to an over-emphasis on additional sources of income, either from bonuses or receiving payments or gifts from patients.

They try hard to look for ways to increase their income and try hard the whole day to think about how to make money and earn increased bonuses. Based on this sort of attitude toward their work and patients, how could they have a good service manner? (president)

Several managers, particularly the presidential interviewees, pointed out that bonus payments can amount to more than twice the basic salary. Under these conditions the incentives associated with bonus payments come to dominate people's thinking. Several managers argued that if doctors' salaries were increased to more reasonable levels and the proportion of income stemming from bonus payments was reduced then doctors would be less influenced by their own interests and would spend more time and energy on providing good medical services. (Details of the bonus system and staff remuneration are discussed in Chapter Six and Eight.)

Utilisation of hospital facilities

Several of the managers who were interviewed expressed concerns about servicing rates and the possibility of over-servicing. They suggested that economic pressures associated with the CMRS (detail discussed in Chapter Six) are encouraging many departments to focus unduly on revenue targets; sometimes to the detriment of patient care. Interviewees mentioned CT and MRI checks and laboratory tests as examples of procedures which are sometimes ordered more for revenue than patient care reasons.

Over-servicing, like under-servicing, is an important dimension of quality of care, as well as having implications for efficiency (Hopkins, 1991). There is a widely held belief that over-servicing is prevalent in these hospitals.

> *Doctors may order checks for one part of the body but the person in charge of the checking would do 3 to 10 parts and then charge the patient according to this. (deputy Party secretary)*

> *Some doctors and other medical staff try to generate money from patients by providing extra services and charging above the standard fee. It is becoming a common problem in hospitals across the country. (vice president)*

Patient satisfaction

Ten percent of survey respondents and several interviewees indicated that patients are satisfied with the services which are provided by their hospitals or departments. Some interviewees suggested that patient satisfaction could still be improved in some ways.

Managers from all of the hospitals spoke of their concerns regarding the image of their hospitals and the importance of how the public perceives a 'quality' hospital. Patient satisfaction is taken to be a major criterion to be satisfied in order to deliver outstanding quality in medical service.

The hospitals in this study take various measures to learn of patients' perceptions on quality of care with a view to strengthening quality of care. When each patient is discharged from the hospitals, he/she is required to fill in a survey form regarding

service attitude. These data are analysed and reported monthly, to the whole hospital and to individual departments.

In addition to the regular hospital survey the Bureau of Public Health also undertakes periodic surveys of patient satisfaction among inpatients and outpatients. These surveys are carried out by staff of the Health Bureau and generate a standardised index. A result of 80% or higher is regarded as 'good'. Many managers commented that these surveys have all found the satisfaction rates of most departments in their hospitals to be above 90 (the full score is 100). For example, a manager from a cardiac surgery department stated that her department ranks first in the survey of patient satisfaction in the whole hospital with a rate of 99% in 1995. For years, there have been no disputes. Patients responded well to the department. The staff have received many letters of thanks.

> *Some patients were once admitted to other affiliated hospitals of KMC and by the provincial hospitals. They said that this hospital has the best service attitude. (departmental head)*

> *The emphasis on professional morality and service manner has attracted a lot of patients who are satisfied with the medical skills and services in our hospital. (head nurse)*

> *Compared with the attitudes of staff in other occupations, the service attitude toward patients in the hospitals is not bad. The responses from patients and their families about the services of the hospitals are good, especially the hard working spirit of the doctors. (vice president)*

It is also obvious from some of the informants' opinions that there is still scope for improving patient satisfaction in their hospitals. Managers indicated that there is a long waiting time for outpatient consultations. On average, the waiting time for an outpatient is over one and half hours in the internal medical department of one of the hospitals.

> *Usually a patient has to wait for a whole morning without getting a diagnosis for one of his/her diseases. (departmental head)*

Some managers also spoke of inconveniences associated with the processing of patients' fee payments. First, the patient has to get the prescription or laboratory or

imaging request from the doctor, then go to the diagnostic departments to have the price recorded on the bill and then go to the cashier for pay before he/she finally has the drugs dispensed or test done.

> *The procedures are complex and tedious, and patients have to rush to and fro. As they are unfamiliar with the surroundings, it wastes a lot of time and is very inconvenient. So patients have lots of complaints and their dissatisfaction is raised. (departmental head)*

Several managers suggested that patients' amenity could be improved in their hospitals. An example is the lack of signs for guiding patients and families in these hospitals.

> *If the hospitals supply good guide board for patients and their families, some difficult situations for patients such as rushing about seeing doctors or doing medical tests could be improved and satisfy the patients. (departmental head)*

Enhancement in hospital revenue

Thirty three percent of questionnaire respondents and 11 interviewees (55%) cited progressive increases in their hospital's fee revenue in responding to the question about 'improvements in the way the hospital is run over the last five years' (see Table 5.1 and Table 5.2). At one of the hospitals, fee revenue has increased from 70 million yuan in 1992 to 163 million yuan in 1996[14].

According to the interviewees, the revenue at the departmental level has also increased significantly. The manager of one department of laboratory analysis spoke about how fee revenue to his department had increased during 1994 from 50,000RMB per month to 400,000RMB per month. The staff bonus also increased from 40 to 50RMB per month for each to 600 to 700RMB per month.

At another hospital fee revenue also increased dramatically, from 6 million yuan per year in 1991 to 70 million in 1996. Managers universally cited these increases in

14. Unless otherwise noted, the information in this section regarding revenue levels is based on that provided in the interviews

fee revenue as representing significant progress in social and economic terms. "The economic development is the most obvious" (Party secretary).

At the third hospital fee revenue has also grown; from five million yuan in 1993 to 24 million in 1995. "Our goal for 1996 is 30 million RMB which we estimate can be fulfilled" (vice president).

It is clear that the fee revenue of these hospitals has increased rapidly in recent years. However, some managers pointed out that a large proportion of the increased revenue of these hospitals is from the sale of medicines and that this proportion has increased from year to year. For example, in one of these hospitals, the expenditure of pharmaceuticals corresponded to about 36% of the hospital expenditure in 1993 and increased to 45% in 1994 and to 55% of the total revenue in 1995. Over the same time the proportion of gross revenue contributed by medical service fees has declined from 50% to 40% from 1994 to 1995.

Several interviewees also commented that total expenditure on the purchase of pharmaceuticals has also increased dramatically over recent years and many hospitals make only a narrow profit margin on the sales of pharmaceuticals (although a larger margin for the more expensive drugs).

Enhancement in people

With regard to organisational development, 13% of respondents to the questionnaire survey and 20% of interviewees (4) reported that increased investment in professional development is one of the main improvements in their hospitals recently.

Many managers mentioned that the hospitals have established five year training programs for junior doctors. All of the recent medical graduates employed by the hospitals are enrolled in this training program. On completion of training they are recognised as fully trained specialists in their fields.

Several managers from one of the hospitals spoke about its policy of supporting its staff in undertaking study abroad or outside the province; attending academic conferences and in supporting research. Each year about 30 medical staff from this hospital are sent to advanced hospitals around the country for over three months specific training; 50 persons take in-service training for upgrading their qualifications

and 150 professionals participate in academic conferences. The hospital has paid particular attention to nursing staff development, which is seen as a backward area in the hospital system of Yunnan Province. The hospital sent over 40 nurses to participate in various national conferences during 1996.

> *As a result, their horizons are broadened and they have gained new knowledge which helps to upgrade their nursing service quality. (vice president)*

Managers from one of the other hospitals studied spoke of the policy in that hospital of supporting two or three staff members each year to enrol in doctoral studies depending on the needs of different specialities. This hospital sends many staff members overseas for advanced study and research training

Among the benefits that this hospital provides to particularly capable staff and staff returning from overseas study are comfortable apartments and other personal benefits. For staff with doctoral training and strong research interests the hospital also provides laboratory facilities and research assistants. "All these contribute to the hospital's top position" (president).

Enhancement in buildings and amenities

Twelve percent of survey respondents, especially among those from the new hospital, spoke of improvements in the amenities for patients and their families and better working conditions for staff as 'recent improvements in the way the hospital runs' (Survey question 12). This hospital was constructed relatively recently and in its development particular attention has been paid to ensuring a comfortable and convenient environment for patients. The vice president stated that after several years' effort the hospital has become a "garden hospital". A second inpatient section has been built recently and it also has been designed with the convenience of patients in mind.

Managers from another hospital spoke of the need to modernise their buildings; in particular the hospital needs a new inpatient building.

> *While the hospital continues to use the old inpatient building, set up in the fifties or sixties, it cannot hope to meet the demands of modern medical service or people's medical needs. (president)*

This hospital has gained the support of the provincial government to have the rebuilding of its in-patient building included in the national Ninth Five-year Plan anticipating commencement of building in 1998. The hospital is also building a modernised branch hospital which will cover 30,600 square meters, with an investment of 60 million RMB. The hospital is aiming to complete this 17-floor building by the end 1998. The hospital has raised 25 million RMB towards the cost of the building. The remaining 35 million RMB will be met through increasing profits and reducing expenditure.

Managers from the one of the other hospitals reported that the leadership of their hospital had also focussed on hospital development in recent years. The hospital has run at a significant surplus in recent years and has managed to put aside funds for capital development. The construction of the new outpatient building and a high rank cadre's ward have been completed and were commissioned in 1996. A grant of forty five million RMB was approved by the provincial government in 1996, over half of which will be used to build the second ward building.

> *We do not lag behind other teaching and provincial hospitals in the pace of development. With modernisation and market reforms the environment is pushing the hospital to move forward. (vice president)*

Enhancement in equipment

Many managers reported that their hospitals have invested heavily in advanced technologies in recent years, including expensive equipment such as computerised tomography and other advanced radiology, magnetic resonance imaging and extracorporeal circulation equipment.

Managers displayed considerable enthusiasm for the acquisition of advanced technology.

> *I feel proud of our hospital's newly-installed facilities and equipment. Compared with what it was five years ago, our hospital has greatly developed. (vice president)*

The increased investment in advanced technologies has been strongly supported by the provincial government. For example, a grant of forty five million RMB was

approved by the provincial government to one of the hospitals in 1996 about half of which has been used to purchase a whole body CT machine, advanced X-ray equipment and an advanced extracorporeal circulation machine.

Conclusions

The broad goal of this research is about the needs of management education for hospital managers. As discussed in Chapter Three I am seeking to understand the degree to which shortfalls in organisational performance are due to lack of management competence with a focus for identifying the direction for management education. I am working to a research model which posits organisational performance as determined by competence and/or policy environment, and the data collection has been designed to cast light on levels of organisational performance and the system relationships.

I have analysed organisational performance in terms of current performance and hospital development. There is a common belief among managers that hospital efficiency has improved in recent years. It is certainly true that there have been significant improvements in activity levels and throughput (reflected in reduced length of stay and an increased bed turnover rate, commonly used as an efficiency indicator in Chinese hospitals, and increased outpatient attendances). Managers point to more efficient procedures, as in the scheduling of surgical operations, and staffing decisions to allow the more efficient use of diagnostic equipment in speaking of the move to increased efficiency.

However, it is clear that increased activity levels are largely driven by the pressure to increase departmental and hospital revenue and some caution should be exercised in extrapolating from increased activity levels and increased revenue to increased efficiency. It appears that some components of the increased activity levels may reflect overservicing (in particular over prescribing and the over use of expensive diagnostic equipment). Overservicing may be associated with increased activity levels and increased revenue but not necessarily with an increase in benefit, and not necessarily with an increase in technical efficiency.

Despite the improvements in throughput the average length of stay remains relatively high and there is clearly still some scope for improving procedural efficiency. Several managers mentioned the long waiting time for scheduling tests for inpatients before operation as one of the important factors affecting length of stay. This is consistent with other studies conducted by Chinese researchers. The waiting time of inpatients before operation was between three and 15 days (Zuo et al., 1987). On average, it was 41% of the total length of stay of hospitals (Wang and Han, 1994). As Ma and Fang (1994) estimated in the Jinghua Central Hospital (Zhejiang Province), the average waiting time (from doctor prescription to report issued) for doing some diagnostic tests were: CT 12 days, fibreoptic bronchoscope 8 days, B ultrasound 7.7 days, gastroscope 5.6 days.

The evidence presented in this chapter suggests a pressing need for further investigation with respect to allocative efficiency. There is a strong pressure on hospitals, departments and clinicians to overprescribe, especially the more expensive medications. While this is rational in terms of revenue generation at the individual hospital level it is an irrational use of resources and perhaps the leading example of allocative inefficiency. There are grounds for concern about the inefficient allocation of resources in relation to other decisions, including the decision to purchase big items of equipment, the setting up of new specialist units, and staff allocation between different departments. These findings are consistent with many other studies about the misallocation of resources in China's health system (Chen et al., 1997; Fang, Xu, and Liu, 1997; Y. Liu et al., 1995; Wang and Liu, 1997; Xu and Lin, 1995).

Allocative efficiency cannot be judged without having regard to the effectiveness of the services provided by the different hospitals, departments or programs and in particular the marginal benefits achieved for each marginal increase in resources. It is not to be measured in terms of gains in 'throughput'. If the services are not effective in terms of caring for patients and helping them to get better, then there are no great gains in allocating extra resources.

These examples also raise the question of productivity of equipment, buildings and staff. I was told by several respondents of equipment that lies unused most of the time and of equipment which was purchased under the pressure of competition between hospitals or between departments within hospitals. The pressure of

competitiveness has some benefits in terms of promoting productive efficiency but it can have a downside in terms of over-capitalisation and reduced productivity.

There is a need for a more explicit strategy to deal with the challenges of modernisation in this area of acquisition of high technology equipment, at the hospital level and also at the level of government. At the hospital level this acquisition of equipment appears to be driven as much by a 'toys for the boys' mentality (big is beautiful, expensive is better) as any intelligent integration of modernisation and efficient service delivery and access to the poor. These problems exist nationally in China and are also well documented in the literature (Chen, and Wu, 1997; Fang et al., 1997; D. Li, 1997; S. T. Li, Jiang, S. H. Li, Zhang, and Wang, 1997; Zheng and Hillier, 1995).

The question of productivity also applies to staff; it seems that there are some departments where staff work under great pressure but there are other departments where staff are idle or are even rostered off duty due to lack of work.

This study has not included any systematic analysis of the technical quality of care or of patient satisfaction. Many informants spoke of improving quality of care and of improved patient satisfaction and commented that where improved activity levels lead to reduced waiting times patients are very pleased. One can infer that improvements in quality of care may have occurred following the increased responsibility at the hospital and departmental levels and through acquisition of better and more up to date equipment. However, none of the hospitals appears to have achieved improvements in quality according to official indicators and managers expressed serious concerns about the increasing numbers of medical accidents and disputes, poor service manners toward patients, overservicing and long waiting times.

The findings suggest that there have been significant improvements in organisational performance considered in terms of organisational development including increasing revenues, improved buildings and amenities and the acquisition of modern equipment. There is also a high level of consciousness about the need to develop staff.

In summary, efficiency is about the cost of producing hospital outcomes, not about how much income hospital services generate. A high level of efficiency is not

the same as strong revenue or a large profit. There are many hospitals which are very inefficient but because of the system in which they are working are able to generate strong revenues and large profits.

In the chapters which follow I shall present the findings of my research in relation to the factors which underly the problems discussed in terms of current performance and hospital development.

Chapter Six

THE PRACTICE OF HOSPITAL MANAGERS

In the previous chapter I have demonstrated that, while there have been striking increases in activity levels in recent years, there remain serious problems in relation to quality and efficiency. In this chapter I have concentrated on patterns of management practice and on the ways in which patterns of practice determine organisational performance. In the next two chapters I develop the research model further and present data in Chapter Seven reflecting managers' judgements regarding competencies and the need for training, and in Chapter Eight I discuss the broader policy environment and the ways in which it constrains and shapes organisational performance. I bring these themes together in Chapter Nine.

An indirect approach has been used in documenting the practice of hospital managers. Managers were invited to write or speak about major issues in their daily management practice including, in particular, recent improvements in hospital management, current frustrations, and management reforms which they see as necessary. My interest is in the links between patterns of practice and hospital performance and it was these links which were the focus of the questions in the survey and interviews.

The broad picture which emerges is of managers facing increasing responsibility as management authority is devolved to the more local level and grappling with some difficult tensions. Managers are taking increased responsibility for departmental and hospital performance but face major problems in personnel management. They are trying to build a commitment to quality and efficiency through leadership and economic incentives but there are serious perverse incentives built into existing financial relationships. For some managers there is confusion between on one hand the objectives of efficiency, productivity and revenue generation, and on the other hand, in speaking of increasing utilisation and servicing rates. I discuss these issues in more detail at the conclusion of the chapter.

I present first, an overview of the broad pattern of the findings; second, a detailed discussion of individual issues emerging; and finally some conclusions about these important issues.

Overview of findings with respect to management practice issues

Recent improvements in hospital management

Survey respondents were asked to identify up to three recent improvements in the ways in which their hospitals were run (Question 12). Most respondents listed three improvements; some cited more than three and a few cited two. A total of 929 'improvements' were cited of which 580 responses were coded as 'practice' (coming from 84% of the total 242 respondents, as shown in Table 6.1), 296 responses were coded as 'hospital performance' and 53 responses were coded as 'environment'[1].

The implementation of the CMRS was the most common improvement cited by the survey respondents (70%), especially in the First and the Second Affiliated Hospital and in presidential and departmental managers. Improvements in the personnel management and quality of care were both cited by more than half of respondents; they were mentioned particularly frequently by the presidential managers.

1. See Chapter Five for more detailed analysis of the 'hospital performance' codes and Chapter Eight for the 'environment' codes.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any improvements in 'practice'	**84**	**88**	**82**	**79**	**100**	**88**	**67**
CMRS	70	78	82	13	62	78	48
Management of personnel	49	51	52	37	85	48	45
Quality of care	40	38	41	42	77	36	38
Financial management	18	19	19	11	46	17	14
Introducing new technology	13	15	9	18	31	12	10
Other	11	10	10	16		11	12
Non-respondents	5	4	3	10	8	4	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.1 Improvements in hospital administration over the last five years (Q12, practice codes only). The table indicates the percentage of respondents (overall and within each category) who mentioned improvements within each of these areas of management practice.

Managers participating in the interviews were also asked about improvements (and deteriorations) in the way the hospital operates (Question 9 & 10). A total of 81 improvements and 30 deteriorations were coded. There were 40 improvements (coming from all of the 20 interviewees) and 16 deteriorations (coming from 65% of the 20 interviewees) coded under 'practice'. The proportions of the 20 interviewees mentioning the improvements and deteriorations which were coded under 'practice' are tabulated in Table 6.2.

In the interviews, innovations in personnel management were the most frequently cited 'improvements'. A relatively high number of people cited the CMRS in speaking about 'deteriorations'. The same number of people cited quality issues as instances of 'improvement' as of those who cited quality issues as instances of 'deterioration'. No interviewees cited deteriorations in relation to financial management or the introduction of new technology.

	Improvements		Deteriorations	
	No	%	No	%
Interviewees mentioning any improvements in 'practice'	**20**	**100**	**13**	**65**
Personnel management	13	65	4	20
CMRS	10	50	5	25
Quality of care	6	30	6	30
Financial management	4	20		
Introducing new technology	4	20		
Other	3	15	1	5
Total number of coded passages	**40**		**16**	

Table 6.2 Improvements and deteriorations in management practice, indicating the proportions of the 20 interviewees who mentioned improvements or deteriorations in each particular area of practice (in response to Q9 & 10). In this table the total number of improvements and deteriorations mentioned and the proportions of interviewees who mentioned particular areas of 'practice' and are tabulated.

Improvements which respondent has introduced personally

Questionnaire respondents were asked (Question 11) whether they had introduced improvements in their own area of practice in recent years. Almost 70% reported that they had, particularly in the longer established hospitals and particularly those in presidential positions. (See Table 6.3).

	Overall (%)	Hospital (%)			Position (%)		
Changes implemented		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Yes	69	80	67	45	92	71	55
No	25	14	28	45	8	23	38
Non-response	6	6	5	10		6	7
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.3 Implementation of change by 242 managers over the last three years (Q11)

Respondents were asked to give examples of change that they had introduced as part of their own practice. Their responses are summarised in Table 6.4 with reference to the codes under which they were categorised.

	Overall (%)	Hospital (%)			Position (%)		
Area of practice		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
CMRS	57	77	47	12	42	66	36
Personnel management	51	49	55	35	58	56	35
Improving quality of care	40	37	45	29	42	46	21
Financial management	28	30	27	18	25	31	24
Introducing new technology	13	15	7	35	17	15	7
Other	11	8	13	12		9	19
Number of respondents	**166**	**73**	**76**	**17**	**12**	**112**	**42**

Table 6.4 Respondents reporting personal implementation of change (Q11) expressed as a proportion of respondents in total and in each hospital and position category.

There is considerable similarity between the changes reported as hospital wide improvement and the changes reported (in response to this question) as change which had been implemented personally. Presumably many of the managers are referring to their own involvement in the implementation of hospital wide change.

Managers participating in the interviews were also asked about improvements which they had implemented in their own work roles (Question 7). The 20 interviewees mentioned a total of 50 examples of change which they had introduced in their own areas of responsibility. These were categorised across six broad areas of practice which are tabulated in Table 6.5.

Area of change	Interview respondents	
	No	%
CMRS	11	55
Personnel management	12	60
Improving quality of care	11	55
Financial management	6	30
Introducing new technology	4	20
Other	6	30
Total number of changes mentioned	**50**	

Table 6.5. Changes in practice introduced by interviewees 'over the last few years' categorised under the relevant codes and tabulated against the proportion of respondents mentioning instances of change in that area. See later in this chapter for more detailed discussion of these instances of change.

A large proportion of respondents cited improvements in personnel management, implementation of the CMRS, and steps to improve quality of care as the major changes in practice which they personally had introduced. Again the aspects of change reported in response to the hospital wide question and the changes that individual managers had been involved in are similar.

Frustrations, difficulties or problem areas in the managerial position

Survey respondents were asked to indicate up to three areas of frustration and difficulty faced in their present management roles (Question 17). Most respondents cited at least one, a large number cited two and some cited three or more. There was a total of 715 responses to this question which were coded under all of the main headings from the coding framework (performance, practice, competencies[2], and environment). There were 197 responses which were coded (coming from 54% of the total 242 respondents) under the coding headings of 'practice' and the data are shown in Table 6.6) as part of sketching an overview of the challenges facing the managers participating in this study.

2. See Chapter Seven for more detailed analysis of the 'competency' codes.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any 'practice' problems	**54**	**46**	**58**	**63**	**62**	**52**	**59**
Personnel management	42	42	44	32	38	44	36
Time management	17	19	19	8	62	13	16
Other	5	7	4	5	15	5	3
Non-respondents	5	4	4	8		5	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.6 Frustrations, difficulties and problem areas (Q17) tabulated against the proportions of respondents who mentioned frustrations coded under each of the headings shown. The percentages are calculated on the basis of the total sample of 242 respondents.

Interviewees were also asked to identify 'some of the most difficult issues facing them personally with respect to the management responsibilities of their job' (Question 3). There was a total of 73 responses to this question which were categorised under the headings of 'practice', 'performance', 'competency' and 'environment'. As shown in Table 6.7, there were 22 responses (coming from 85% of the 20 interviewees) which were coded as 'practice'.

	Interview respondents	
	No	%
Interviewees mentioning any 'practice' problems	**17**	**85**
Personnel management	13	65
Time management	6	30
Other	3	15
Total number of coded passages	**22**	

Table 6.7 Difficulties and problem areas facing managerial responsibility (Q3) tabulated against proportions of interviewees mentioning particular areas of problems.

Reforms contributing to improved patient care and improved efficiency

Survey respondents were asked (in Question 15) to nominate the 'single most important management reform that you would like to see in your hospital which would contribute to improved patient care and improved efficiency?'.

There was a total of 533 responses to this question which were categorised under the broad headings of 'practice', 'competency' and 'environment' and there were 271 responses which were coded (coming from 78% of the total 242 respondents) under the code heading of 'practice'. In Table 6.8 the areas of needed reform are tabulated against the proportion of respondents mentioning needed reforms in each area.[3]

Restrictive personnel practices figure highly in these responses, particularly in the First Affiliated Hospital and among presidential respondents.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any needed reforms in 'practice'	**52**	**60**	**46**	**47**	**77**	**54**	**40**
Personnel management	45	57	42	42	70	46	47
Financial management	17	12	20	16	23	16	16
Total number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.8 The single most important reforms in area of management practice which would contribute to improved patient care and improved efficiency tabulated against proportions of respondents mentioning particular areas of reform (Q15).

The same question was asked in the interviews and the results are shown in Table 6.9. There was a total of 61 responses to this question which were categorised under the broad headings of 'environment', 'practice' and 'competency' and there were 20 responses (coming from 85% of the 20 interviewees) which were coded as 'practice'. In Table 6.9 the areas of needed reform are tabulated against the proportion of the 20

3. Around 27% of respondents cited improvements in quality of care and 14% cited improvements in efficiency in their responses to this question. These responses have not been included in the data tabulated in Table 6.8 as they are categorised as outcomes of reform rather than identified reforms.

respondents mentioning needed reforms in each area.[4] Again the personnel issues emerge as the most commonly cited by the interviewees.

	Interview respondents	
	No	%
Interviewees mentioning any reforms needed in 'practice'	**17**	**85**
Personnel management	15	75
Financial management	5	25
Total number of coded passages	**20**	

Table 6.9 The single most important management reform which would contribute to improved patient care and improved efficiency tabulated against proportions of interviewees mentioning particular areas of reforms in management practice (Q11).

Specific areas of management practice

Contract managerial responsibility system (CMRS)

Since the late 1980s the management of the First and Second Affiliated Hospitals has been structured according to the 'contract managerial responsibility system' or the 'head of department responsibility system'. The CMRS encompasses patient care, teaching, research and the use of resources. The head of a department signs an annual contract with the president of the hospital which includes objectives and measurable targets relating to the agreed objectives. The head of department is accountable to the president for the achievement of the objectives as measured.

Achievement of departmental objectives is assessed by the hospital leadership on a monthly basis and a proportion of fee revenue generated by each department is returned to that department, depending on their achievement of their targets. The department is assigned to one of three categories: (1) surpassing the goal (score 100), in which case 20% of the fee revenue collected through that department is returned and the head gets a personal salary bonus; (2) reaching the goal (score 90 to 100), when the

4. Around 30% of respondents cited improvements in quality of care and 15% cited improvements in efficiency in their responses to this question. These responses have not been included in the table.

central administration returns 20% of fee revenue but the department head gets no personal bonus; (3) failing the goal (score lower than 90): no return of funds to the department.

Since salaries are generally low the added income available through bonus payments makes a big difference to departmental staff. If the department is awarded the 20% this will flow on to staff remuneration within the department. Within the department the manager has discretion to allocate additional bonuses to individuals so they have a personal interest in the department achieving (and exceeding) the assigned goals and targets.

Under the CMRS, the hospital's leadership reappoints heads of department each year. The leadership will generally reappoint managers who did good work and has the option of replacing (as head of department) those who did not. This system places pressure on the heads of departments to manage the department effectively and efficiently:

> *Once the leadership has found somebody who has low ability, does not set a good example for the masses, does not have a good reputation and does not pay attention to the development of the department and the achievement of social and economic benefits he or she should be changed and let them leave the post. (Party secretary)*

Fifty seven percent of questionnaire respondents (132) ranked the CMRS first among the improvements introduced over the last five years (Question 12) and the ways in which they saw it contributing to patient care, efficiency, revenue and hospital development are summarised in Table 6.10. They were then asked (Question 13) to indicate how this 'main improvement', the CMRS in this case, had contributed to 'improved patient care', 'improved efficiency' and 'other' benefits. The mechanisms cited by these respondents, through which the CMRS had contributed to improved performance, were coded. There were 270 responses in total which were coded and analysed.

Contribution of CMRS to improved 'performance'	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
(1) Quality of patient care	63	66	61	50	60	67	53
- improving patient satisfaction[5]	30	34	28	25	40	36	26
- improving service manner[6]	24	22	26		40	29	19
- upgrading the quality of care[7]	20	17	22	25	60	23	6
(2) Efficiency of hospital	71	86	57	100	100	75	58
- increasing bed turnover and shortening length of stay	44	54	35	50	60	45	39
- increasing the efficiency of use of hospital equipment	33	40	26	50	60	36	22
(3) Organisational development	29	27	29	50	80	26	28
- enhancement in revenue	23	22	23	50	40	19	31
- enhancement in buildings	17	12	22		20	9	33
Other	14	10	14	25	40	14	14
Number of respondents	**132**	**59**	**69**	**4**	**5**	**91**	**36**

Table 6.10 The contribution of the CMRS to improved hospital performance (Q13). In this table the codes under which these mechanisms of improvement were grouped are tabulated against the proportions of respondents.

5 . The kinds of responses to Q13(1) which were coded as *improving patient satisfaction* are exemplified by: 'Patients were very satisfied with the shortening of waiting time for medical check-up'; 'The feedback from patients show that the satisfaction rates of our department are quite high'; 'Because patients can get timely treatment, according to recent patient survey, they feel satisfied with our department'; 'We used our best reputation to gain the trust of the patients. Some patients compared the affiliated hospitals and the provincial hospitals, then considered that our hospital has provided the best services.'

6. The kinds of responses to Q13(1) which were coded as *improved service manner* are exemplified by: 'The service manner of medical staff has been improved significantly since the implementation of CMRS'; 'Patient investigation have found that our service manner has been improved gradually'; 'The work done by a person has been connected with the allocation of the bonus and the evaluation of the promotion. The service attitude toward patients has become a great concern for medical staff'; 'The relationship between medical staff and patients has been improved.'

7. The kinds of responses to Q13(1) which were coded as *improved quality of care* are exemplified by: 'Our medical care quality has also been enhanced through setting quantified goals as evaluated standards for medical staff'; 'We have carried out a nursing responsibility system to improve the quality of nursing care'; 'The cure rate and successful rescue rate have been increased'; 'The medical treatment quality and the service level have both been improved. We try to attract more patients. Actually, the social benefit and economic profit are connected.'

Obstacles to better outcomes associated with the CMRS	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
(1) Quality of patient care	24	28	21		60	21	27
- bad service manner[8]	17	21	13		40	11	16
- inappropriate service[9]	12	10	16		20	11	15
- medical accidents[10]	5	10	3		20	6	11
(2) Efficiency of hospital	11	9	13		40	9	15
- resource allocation[11]							
(3) Other	4	3	3			5	6
Number of respondents	**132**	**61**	**71**		**5**	**91**	**36**

Table 6.11 Obstacles associated with the CMRS to improved hospital outcomes (Question 13). In this table the codes under which these obstacles to improvement were grouped are tabulated against the proportions of respondents.

8. The kinds of responses to Q13(1) which were coded as *bad service manner* are exemplified by: 'Our service manners have some deterioration due to over emphasis on economic profits'; 'The medical staff's attitude toward patients needs to be improved'; 'Nursing staff need to improve their service manner, to know how to treat patients and serve the customers'; 'Some people take economic profits at the expense of medical ethics, bad service manner brought a bad reputation to the hospital.'

9. The kinds of responses to Q13(1) which were coded as *inappropriate services* are exemplified by: 'In order to increase the department's profits, some doctors asked patients to have repeated medical checks even if they did not need to'; 'Some patients were asked to have some expensive medical checks, such as CT, MRI which caused a big financial burden to them'; 'The contract system lays emphasis on economic profits. This has led to a misuse of the medicines in most departments'; 'We have to work very hard to complete the index values that are set up by the hospital.'

10. The kinds of responses to Q13(1) which were coded as *medical accidents* are exemplified by: 'If medical staff invest their main energy and time in economic gain and overlook their sense of responsibility, medical accidents would easily occur'; 'More medical accidents occurred in our hospital over the last few years'; 'We have not had medical accidents like other affiliated hospital had in recent years'; 'The increase of medical accidents had a very bad influence to our hospital reputation'.

11. The kinds of responses to Q13(1) which were coded as *resource allocation* are exemplified by: 'The construction of the emergency department should be strengthened, including the development of professionals and equipment'; 'People like to work in the departments that have good economic profits. This results in an unequal allocation of clinicians in the hospital'; 'Some departments get more investment from the hospital. They develop fast and have good profits. Some departments do not get much attention from the hospital. They develop slowly and have low profits. This is unbalanced and unfair between the departments'; 'The allocation of bonuses are unequitable between departments.'

Of the 132 who ranked the CMRS as the leading 'improvement' 39 respondents cited problems which they attributed to this system, mainly related to the quality of care and hospital efficiency. There were 65 responses in total which were coded and analysed. (See Table 6.11).

Quality of patient care

Of the 132 survey respondents, most of them cited improved quality of care as one of the important benefits of the implementation of the CMRS in their hospitals. Most commonly cited were improvements in patient satisfaction (30%), service manner (24%), and quality of medical care (20%).

> *We are trying to reform the hospital by means like the CMRS for departments. We have to manage the hospital through quantified goals such as bed turnover rate, service manner, medical morality and economic goals, etc. Such an approach proves effective in upgrading our medical care quality and efficiency. Both patients and the staff feel quite satisfied about it. (vice president)*

Under the CMRS managers are accountable for performance measures which relate to quality of medical care, service manners, efficiency and economic goals. These performance measures include indicators of the cure rate, recuperation rate and rescue success rate of critical patients. Survey respondents report that these indicators have increased in their hospitals. This may show that the hospitals are providing a higher quality of medical care (see the discussion of these indicators in Chapter Five).

One of the objectives addressed by the CMRS is to improve service manners and a number of indicators have been set up to follow the achievement of this objective. These include: access by medical staff to education in medical ethics, patient satisfaction (measured through questionnaires), and reports of serious quarrels between medical staff and patients. According to presidential level leaders departments where serious quarrels occur or where attitudes are found to be not positive will record a low score and lose their 20% of fee revenue.

Meanwhile, because the bed turnover rate has increased and the work efficiency of paramedical departments has been improved, patients are now getting more timely

treatment, so that the waiting times for appointments or admissions have been reduced. These have contributed to improved patient satisfaction.

Problems associated with the CMRS

Thirty nine respondents (39 out of 132 who mentioned the CMRS as the most important area improved in management practice) considered the CMRS also has brought with it some problems which affect quality of patient care in the hospitals, including poor service manner (nine percent), inappropriate service (seven percent) and medical accidents (three percent).

This phenomenon was also discussed in the interviews and 25% of managers interviewed mentioned problems associated with the CMRS. They argued that the CMRS lays undue emphasis on maximising revenue and because of the economic pressures, some department heads tend to put economy first at the expense of a more inclusive consideration of the department's objectives including quality of care, personnel training and medical research. Managers are under pressure to focus on making money from patients and how to allocate the bonuses; this can lead to a certain laxity in social responsibility. The expectation of payment by patients can result in a poor service manner toward patients who are not able to make such payments and can lead to over-use of hospital facilities and inappropriate services provided to patients (e.g. giving unnecessary medical checks/tests). Some managers reported, apparently on anecdotal grounds, an increase in the frequency of medical accidents over the last few years which they attributed to the pressures associated with the CMRS:

> *The CMRS emphasises maximising income. Some people look to economic gains at the expense of medical ethics. This has led to a laxity in social responsibility on the part of some hospital managers. (president)*

> *The CMRS in the hospital does not go with some of the department concrete items. The hospital tries to increase its profits, and emphasises the economic performance of departments. We have to achieve the targets set up by the hospital, on the other hand, we have to meet the requirements of the patients. We are facing a lot of contradictions and it is very hard to accomplish. (departmental head)*

The purpose of the CMRS is to increase the authority and responsibility of managers at the hospital and departmental level. It brings together responsibility, authority and the opportunity for benefit. There are incentives for staff to work to upgrade quality of care, improving service manner and work efficiency. However, the goals and objectives for which managers have 'responsibility' are not always clear and managers sometimes fall back to focussing on the explicit commitments listed in their contracts rather than managing to achieve the more broadly conceived goals of the hospitals. Some managers paid less attention to the provision of high quality of care than to revenue. They had set a high budget for bonuses within the retained profits fund (from patients' fees). These problems are expected to be resolved in the course of further improving the CMRS.

Hospital efficiency

Thirty nine percent of the 132 respondents who identified CMRS as the main recent improvement stated that CMRS had contributed to improved efficiency. They claimed that the CMRS had contributed to increasing bed turnover and shortening length of stay and increased efficiency of use of hospital equipment. This view was particularly common among presidential level respondents.

Many of the managers who were interviewed also stated that the introduction of the CMRS had improved the working efficiency of their hospitals. One of the most significant aspects has been on bed usage:

> *The head of department must consider all the indicators and targets which are set out in the contract because the responsibility is put on him. If the beds are vacant or the average length of stay is quite long, the department will be inefficient. (departmental head)*

> *The CMRS enhances more efficient administrative procedures, such as the efficient arrangement of operation scheduling and medical checks in paramedical departments for patients and improvement of interdepartmental relations. The problem of unnecessarily long stay in hospital, waiting for operations or procedures, has reduced significantly. (president)*

Interviewees stated that bed turnover had increased and the average length of stay has decreased in every department of the First and the Second Affiliated Hospitals each year since the CMRS was implemented in these two hospitals. Consequently, the number of admissions has increased; the patients get more timely treatment and the hospitals' and departmental revenue is increased.

Significant improvements have also taken place in the efficiency with which the hospital's expensive equipment is used. For example, in the First Affiliated Hospital, originally the CT service operated for half of each day, and patients had to wait for three or four days to get a CT check. Now this service is open all day, which means that patients can have a CT check immediately, on the same day of their registration:

> *This makes full use of our hospital's equipment as well as increasing our income and satisfying our patients. (president)*

However, four interviewees pointed out that the CMRS has also brought some problems of inefficiency in hospital management, particularly in the inefficient use of hospital resources:

> *Because of the incentives associated with the CMRS and other economic pressures, the departments are keen to exploit the hospital's facilities to maximise revenue, so they ask patients to have CT or MRI checks even if they don't need to. (Party secretary)*

> *Because of the economic pressures the departments compete in the purchase of equipment for raising their profits by giving patients more medical checks, which proves to be a waste of money. (general administrator)*

Over emphasis on maximising revenue also results in an unreasonable allocation of hospital resources, through the maldistribution of medical staff as well as equipment. This problem was cited especially by the presidential respondents. People are keen to work in departments which have a strong earning capacity and are reluctant to work in the departments with low revenues. As a result, there is an excess of personnel in some departments, while there is a lack of personnel in other departments.

Because of the imbalance of hospital investment among the departments, some departments improve quickly and others progress slowly. The allocation of hospital resources affects relations between departments, and can weaken staff morale.

Technological departments like the Radiology Department, get a lot of investment in our hospital. They quickly renew medical facilities and gain good profits, and as a result, higher income for their own staff, and a greater difference in development when compared with other departments. This is a great imbalance. (vice president)

The Emergency Department in particular is in need of improvement. The staff there have heavy workloads and receive less bonuses than those of the medical technological departments which use hospital's facilities to make high profits. (departmental head)

There is no doubt that the CMRS has helped the hospitals tap their unused resources, develop productivity and improve economic performance. However, it has also contributed to inefficient and improper use of hospital resources, and the demoralisation of staff. The contract terms have led to imbalance between departments, with the result that increasing profits in some departments benefit only certain staff rather than the hospital or the staff as a whole.

Hospital development

Sixteen percent of the 132 respondents who identified CMRS as the main recent improvement stated that their hospital's or department's revenues have increased since the implementation of the CMRS.

We have been able to generate revenue by providing more medical services and increasing our efficiency. (vice president)

Before the reforms, the state exercised centralised control over the income and expenditure of the hospitals. The hospitals dependent on the state to allocate funds for their expenditure and development. The hospital therefore had no funds at their disposal. Since the introduction of the CMRS, the hospitals as well as the departments are able to use a percentage of their revenue for development. Generally speaking, the revenue of these two hospitals has increased by an average of over 25% per year over the past four years. As a result, these two hospitals have been able to construct some new buildings by investing themselves:

The comprehensive responsibility goal system contributes to the social influence and the hospital development. (departmental head)

Personnel management

About 50% of the respondents to the questionnaire survey (Table 6.1) cited instances of better personnel management among the main improvements in the operation of their hospitals over recent years. Likewise over 65% of the interviewees (see Table 6.2) cited improved personnel management among the main improvements in the operation of their hospital. However, three interviewees (15%) cited aspects of personnel management as deteriorations. Forty five percent of respondents to the questionnaire survey (Table 6.8) and 75% of the interviewees (Table 6.9) also mentioned aspects of personnel management among the priority areas of management practice needing to be reformed.

The instances of improved personnel management mentioned by the 49% of the survey respondents who identified improvement in personnel management as the main improvement were grouped under the three codes listed in Table 6.12: access to professional development opportunities, improved commitment and motivation amongst staff, and clearer and better documented rules and regulations There were 202 comments in total which were coded and analysed in terms of the three categories shown.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any improvements in personnel administration	**49**	**51**	**52**	**37**	**85**	**48**	**45**
Staff development access[12]	36	35	42	21	54	33	33
Staff motivation[13]	26	12	28		31	27	21
Setting up rules and regulations[14]	22	22	21	24	15	22	22
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.12 Improvements in personnel management as one of the main improvement in hospital management over the last five years (Q12). The aspects of personnel management are tabulated against the proportions of respondents citing improvements in those areas.

Notwithstanding these examples of improvements 42% of respondents cited personnel management problems in responding to the question which asked about frustrations and difficulties. There were 142 comments in total which were coded and analysed within this category. These personnel management issues were coded under the headings listed in Table 6.13.

12. The kinds of responses to Q12 (improvements in hospital administration) which were coded as access to *staff development* are exemplified by: 'Many young doctors have been sent to other advanced hospitals around the country or abroad for further studies'; 'The hospital has provided good conditions to support staff's off-service training'; 'We focus on the training of professionals. Only if professional levels and medical virtue are improved, can quality be guaranteed'; 'The hospital has spent more money strengthening the training of young medical staff.'

13. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *improved staff motivation* are exemplified by: 'The introduction of the bonus system has given staff great work incentives'; 'The departments and individuals have been given clear responsibility for their work. They have a strong sense of responsibility to the work'; 'The departmental managers were given increased autonomy to manage their departments. This stimulates the enthusiasm by people'; 'The establishment of a link between patient care, teaching, research and economic goals and bonus distribution stimulates staff's work incentives.'

14. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *clearer and better rules and regulations* are exemplified by: 'We have devised and implemented the rules regarding bonus distribution and attendance'; 'We have set up managerial rules which include rules of patient care, teaching and research, and the related administrative sections check regularly and supervise'; 'We have set up some rules, all the staff in the department have to carry them out. Only by setting up rules for the department can the department be managed well'; 'We have set up rules regarding ward visits by doctors and to a great extent guaranteed the quality of medical service'.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any problems in personnel administration	**42**	**42**	**44**	**32**	**38**	**44**	**36**
Interpersonal issues[15]	27	27	27	26	38	28	21
Lack of rules and regulations[16]	19	16	21	13	15	19	19
Staff welfare[17]	13	11	15	11	8	13	12
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.13 Frustrations, difficulties and problems in the personnel management area tabulated against the proportions of respondents who mentioned frustrations which were coded under each of the headings shown (Q17).

Personnel management problems were the most frequently listed group in the responses to Question 15 (which asked respondents to identify the most important management reform that they would like to see "which would contribute to improved patient care and improved efficiency"). One hundred and nine respondents (45% of the total respondents) cited issues in personnel management as issues calling for reform; these are tabulated in Table 6.14.

15. The kinds of responses to Q17 (frustration and difficulties in managerial positions) which were coded as *interpersonal issues* are exemplified by: 'The disharmony of interpersonal relationships has brought a lot of troubles. We have to spend a lot of time and energy on it'; 'I'm most afraid of coordinating various complex interpersonal relationships'; 'Nepotism makes our administrative work quite difficult'; 'We feel very tied in dealing with interpersonal relationships.'

16. The kinds of responses to Q17 (frustration and difficulties in managerial positions) which were coded as *lack of rules and regulations* are exemplified by: 'No clearcut rules and regulations for staff's reward and discipline'; 'No clear rules and regulations, difficult to overcome equalitarianism'. 'There should be rules and regulations for management instead of doing things according to personal whim'; 'There are many regulations in each department, but how to put them into action is a real problem.'

17. The kinds of responses to Q17 (frustration and difficulties in managerial positions) which were coded as *problem of staff welfare* are exemplified by: 'The staff's living conditions should be improved in order to arouse their work fervour'; 'Those who work at the front line have a hard life. They feel both work and family burdens are very heavy. But their welfare are poorer in comparison with other service occupations'; 'It would be very difficult to satisfy the medical staff if the hospital doesn't improve their working and living conditions'. 'The young doctors work very hard, but their personal benefits have not been well considered.'

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any reforms needed for personnel administration	**45**	**57**	**42**	**42**	**70**	**46**	**47**
Setting up rules and regulations[18]	32	40	28	26	46	33	22
Staff development[19]	17	24	10	21	23	17	14
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.14 'The single most important management reform which would contribute to improved patient care and improved efficiency' in the personnel management area (Q15).

Staff development

Managers perceived access to staff development as a key area of improvement in personnel management (Table 6.12).

Many of the interviewees argued that in order to maintain the hospital's position in an increasingly competitive environment, including keeping a high reputation for quality, the hospital must raise its medical and nursing standards. The need for further training for staff was commonly explained on this basis:

> *Employees are the most important resource for the hospitals. Success, efficiency, and effectiveness of hospitals are all dependent upon employees. (president)*

18. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *setting up rules and regulations* are exemplified by: 'The hospital or department should set up clear rules and regulations to specify each staff responsibility'; 'Our hospital needs to have rules, to break the 'iron bowl' and really give expression to the principle of 'more pay for more work''; 'The hospital must improve the situation of blurring of division of duties of different levels of doctors as well as of other medical staff'; 'We need to set up and perfect various rules and regulations and start to carry them out, from the hospital leaders down.'

19. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *reform of staff development access* are exemplified by: 'The leadership of hospital should pay more attention to the training of medical staff'; 'We are facing the problem of worsening of medical quality, the training of professionals becomes an urgent issue to our hospital'; 'We need to upgrade our staff's qualifications and send more people to study abroad or to other provinces'; 'Some people do not like to study outside the hospital because of their economic situation, especially some young people who are preoccupied with income issues.'

If the hospital does not pay attention to personnel, by the end of the century, due to keen competition, the level of its medical treatment will certainly be left behind others. (departmental head)

Staff development is more important than equipment, because the hospital can purchase equipment through loans if it lacks money, yet personnel training is a long-term process. So the hospital has to put more effort into personnel training. (vice president)

One manager stated that in 1994, the Ministry of Public Health issued a policy on the training of junior doctors and following this, the Second Affiliated Hospital has adopted a formal training program (commencing in 1995) which involves all of the junior doctors proceeding through a five-year training program, administrated at the hospital level. All the junior doctors have to take turns working in the different departments to increase their knowledge and experience. The shortest period in one department is three months and for some disciplines it is six to twelve months. After three-year foundation training, moving through a range of positions, they settled down into one department, and another two-years of specialised training follows. After five years, the doctor is recognised as 'chief' (the second level of the hierarchy). The leadership of the hospital is very committed to this system: "no matter how difficult the departments find staff shortages, the hospital leadership requires them to make the arrangement." (vice president)

Another personnel training plan put in place by the Second Affiliated Hospital is to encourage staff to proceed to advanced studies. Several of the interviewees from the Second Hospital commented that in many hospitals there are barriers to staff participating in advanced studies and foreign languages studies. But the leadership of this hospital has invested considerable energy and time in sending young doctors for further training outside the province to raise their professional level and to learn foreign languages. The leadership stipulates that doctors and nurses who go outside the province for advanced studies in professional areas or for foreign language learning can keep their bonuses (the learners' bonus is the average of the different bonuses in their department), and at the same time get some subsidies because of the higher expenses outside the province. The subsidy has been increased significantly, from 0.3RMB per day to 5RMB per day, since January 1996.

Part of the reason for implementing this new program was a concern that professional skill improvement was being neglected due to an overemphasis on revenue-raising. In order to entrench these two training programs (and prevent their discontinuation in the event of changes in the presidential position) they were handed over to the Hospital Staff Congress for discussion and made unchangeable so as to avoid personal interference. There is strong support within the hospital to continue these policies. Personnel training is seen as a long-term investment and requires continuity over a long period for its success.

Managers of the First and the Third Affiliated Hospitals stated that they have paid particular attention to nurse training. For example, when the Department of Cardiac Surgery was first established at the First Affiliated Hospital (in 1993) the specialist nurses were all new staff. In the last three years, however, six of the 14 nurses in the department have received training outside the province. The head nurse said: "No matter how pressured the work is and how great the staff shortage, we still ensure specialist training for our staff. This greatly enhances nursing quality and efficiency. The number of the department's nursing complication cases is close to zero." The department is planning to further develop its specialist nurse training.

The head of nursing from the Third Affiliated Hospital emphasised that the hospital hopes to upgrade the nurses' professional skills in many ways and as quickly as possible. In order to upgrade nursing quality and develop the nurse supervisors' teaching skills, the Third Affiliated Hospital organises weekly lectures by nurse supervisors. The teaching content is about specialised nursing in different departments. The department of nursing conducts after-lecture interviews among the nurses to evaluate the lectures. The hospital also arranges for selected staff members to participate in the monthly seminars organised by the Provincial Nursing Committee.

Problems in staff development

In speaking about priority management reforms 17% of respondents cited problems relating to access to staff development (Table 6.14):

> *As for the overall plan for personnel training, the presidential leaders are all medical professionals, so they only invest limited time and energy in*

management. The hospital has no clear plan or long-term goal for personnel training. (departmental head)

At present the hospital relies heavily on the old generation of doctors in medical work. The junior doctors still cannot catch up. In two or three years the hospital will face a shortage of professionals. There is a danger we will be overtaken by others and the quality of medical care will deteriorate. (departmental head)

Many medical accidents occurred during 1995, one of the major reasons was that the professional skills of the hospital staff are poor. As a matter of fact, in some departments, people are unwilling to go for advanced studies, they focus on income now at the expense of academic advancement. Those, however, who are unwilling to learn will be eliminated in the long run. (head nurse)

Managers from the Third Affiliated Hospital described their hospital as being strong in its hardware (housing, equipment) "but it is weak in the hospital's software; the professional skills are poor" (vice president). Many professional staff are the original staff of the Tumour Department in the First Affiliated Hospital. They are familiar with their own field and possess good skills. However, as the hospital is new, it has had to employ many people from the county hospitals, who have no background in the field. The hospital urgently needs to train medical and nursing staff in oncology.

There is also a feeling among managers that in addition to the hospital's responsibility to provide good training, staff members themselves should also accept responsibility to study hard to upgrade their capability, especially those who transferred from the counties. One manager said, "this group of people are old in age and experience, poor in professional level and hard to manage". Managers see a need for the hospital to have a comprehensive and long-term plan for staff development and to set up some regulations for encouraging these people to improve their professional level. There is a feeling that the hospital will not be able to keep its status as a provincial-level hospital unless it can raise medical and nursing standards.

Staff motivation and welfare

In speaking about improvements in hospital operations 26% of the total respondents cited improvements in staff motivation (see Table 6.12).

Conversely, in commenting on problem areas in their present management positions, over 13% of the 242 respondents made some reference to the staff welfare (Table 6.13).

Improvements in staff motivation were mentioned most frenquently by managers from the First Affiliated Hospital and by departmental managers. This may be related to the introduction of the bonus system in the First Hospital. Mention of improvements in staff motivation was much less common among respondents from the Third Affiliated Hospital.

The CMRS and the significance of bonus payments featured in much of the discussion of improved staff motivation. One of the principles of economic reform in China has been the principle of "more pay for more work" and the role of bonus payments fits in with this. Another principle is decentralisation of control but while the reforms have given hospital managers more autonomy in operational decisions, decentralisation was withheld in certain areas, in particular the determination of basic staff salaries. As the hospitals can do nothing about the basic salary, the leadership of many hospitals has elected to pay relatively larger bonuses which are linked to people's work performance with a view to creating stronger work incentives. This system has become a major form of staff motivation in Chinese hospitals. In some cases total remuneration, including bonuses, can be up to three times the basic salary.

Many managers described the bonus system as ending the practice of "everyone eating out of one big pot". In the past, hospitals were restricted to paying no more than two and half months' basic wages as an annual bonus whereas now the hospital can decide on the amount of bonuses for their staff members according to the hospital's ability to pay. With the implementation of the CMRS (in the First and the Second Affiliated Hospitals) there are three main changes to the bonus system: first, there is no upper limit on bonus payments; second, bonus payments are no longer uniform across the hospital but depend on the revenue raising capabilities of individual departments; third, bonus payments are no longer automatic; staff who are not seen as hard working

or who work in departments which do not earn much revenue will not necessarily receive bonus payments.

The bonus distribution is intended to be linked to the quantity and the quality of a person's work. That means a person's total remuneration is determined by his/her performance on the job as well as his/her professional title. This includes the possibility of penalties as well as rewards for good work. For example, for refusing to see a patient, a doctor's bonus may be reduced by 10% and the bonus will be cancelled for quarrelling with patients, no matter what the reason is.

The principle of bonus payments being linked to work performance is supported by managers at the departmental level. All the departmental interviewees stated that the introduction of revenue sharing, at the department level and then to individuals, has put in place strong incentives for increased productivity and efficiency. The managers gave some examples about how they used the bonus system to create stronger work incentives.

The Psychiatry Department (based in the First Affiliated Hospital) has 16 beds in the Branch Hospital. The manager of the department spoke of a major problem in the running of the department prior to the introduction of the CMRS. In his view there were far too many referrals coming from the branch hospital, often for relatively minor issues. It appeared that there was a reluctance among the psychiatrists based at the Branch Hospital to take full responsibility for patient care decisions in accordance with their training and status. It seemed that "whenever a patient had some problem, the head or assistant heads would have to rush over". "Working at two different sites became a headache for the managers".

The total responsibility system enabled a contract to be made between the manager of the Psychiatry Department and the psychiatrist currently assigned to managing the 16 bed unit in the Branch Hospital. For the term of his/her six month appointment in charge of the unit, full responsibility, authority, and profits are assigned to the unit manager. The unit manager is encouraged to use his/her own capability to tackle all the problems, including attracting and diagnosing patients, and coordinating interdepartmental relationships. If successful they will receive a generous bonus. Since the introduction of this contract the 'headache' is nonexistent. In the past, no one

wanted to be assigned to the branch hospital. Now everyone is requesting such assignments for reasons of professional improvement and sense of achievement. In the main hospital one has to work under supervision, whereas at the branch hospital they can work independently and solve their own problems.

"The quality of patient care and the work efficiency have been improved in our department due to the linking of the doctors' work to their bonus." In the Department of Neurology the manager decides about bonuses for all of the medical staff according to quantified standards based on responsibility for groups of patients. A resident doctor in the department supervises five to seven beds. According to the head of Neurology, the greatest problem in the past was that "taking patients or not made no difference to individuals' income", so no one was willing to take patients, and "all tried to shift the burden to others". Now the situation is different. The quantifying of work includes the number of medical records each doctor is responsible for, the adequacy of his/her patient records and patient throughput. This had only been in operation for two months before there was a change in the department.

> *Everyone now vies to take and discharge patients. Patients get timely treatment, and the bed usage rate and turnover rate have increased, while the average length of stay is shortened. (departmental head)*

The hospital stipulates 28 days as the average length of stay, but in the Neurology Department length of stay has been reduced to around 21 days since the introduction of this system. Managers believe that medical service quality and manners have also improved, to the satisfaction of the patients. The department is now functioning well. The staff work with a very positive attitude and do not need to be urged, as they used to.

The department also encourages research by linking research activity to the distribution of bonuses. The department contributes five percent of its monthly bonus to its research fund. At the end of the year, anyone who has done some research is rewarded, no matter whether they have published an article or not. Those who have publications will get more reward. This arrangement is designed to encourage staff to undertake research. Last year, the department published more articles than any other unit in the hospital.

Problems with the bonus system

Interviewees were asked about recent deteriorations in the way the hospital operates (Question 10). Fifteen percent of interviewees (three managers) pointed out problems associated with the practice of using bonus payments to create incentives. Some people sought economic gain at the expense of their sense of responsibility and medical ethics. They invest their energy and time in considering various ways to maximise their incomes rather than in providing high quality medical care or in upgrading their professional skills.

> *Some people charge more than the standard fee, or organise unnecessary medical tests with a view to generating more revenue for their department. And some people are unwilling to go for advanced studies because they would have to forego high bonus payments while they are away. (vice president)*

> *In some departments which do not have a large income and where bonus payments are not high, some people do what they like but not what needs to be done. They don't want to work hard but expect to get rewarded in spite of their lack of devotion to their work. (general administrator)*

These pressures can lead to a poor service attitude towards patients and have a negative impact on staff development. At least half of the interviewees suggested that the bonus system can have a bad influence on the quality of medical care in the hospitals.

Staff welfare

Presidential interviewees spoke of how they have tried to improve the welfare of staff (in housing, traffic, telephone service).

However, around 13% of the survey respondents (Question 17, Table 6.13) and 25% of the 20 interviewees (Question 11) indicated that the hospitals should be doing more to enhance the welfare of staff:

> *Patients do not come unless the hospital has reached a certain scope and good medical level, and experts will not stay unless the welfare of the medical staff improves. The hospital should try to provide good conditions for department heads and improve their welfare. As the saying goes, 'A thousand*

soldiers are easy to find, but a good general is hard to get'; 'An incapable commander exhausts thousands of soldiers to death'. (departmental head)

Several managers complained that staff do not have good welfare benefits. Some work hard but the hospitals invest in other areas at the expense of staff's living conditions and this affects their work incentives.

Two younger departmental heads spoke about the difficulties faced by young doctors who have to wait a long time to be allocated a flat. The hospital has a principle that only those who have worked in the hospital for five years or more have the right to be allocated flats to live in. Younger doctors may have to accept a room or flat rented by the hospital from peasants; there may be no electricity or water, let alone a place to study. This can affect their work badly:

Hospital should take measures to keep those talented personnel. In recent years, there were some people who left the hospital. The hospital had invested a large amount of money and time in training and cultivating these people; they left because the hospital could not keep them. It is a pity indeed. (general administrator)

Everybody wants to go to good places. Only water wants to flow to the lower places. The doctors working at the first line of the hospital should be treated differently from those working at the backup line. The hospital should consider improving their living conditions and other aspects of their welfare so that they will have greater motivation to work. (departmental head)

Managers from the Third Affiliated Hospital argued that the hospital needs to improve its staff's welfare. "The medical staff are willing to work hard but the hospital has so far given them no incentives." The monthly bonus, for example for each individual in this hospital (which has not implemented the CMRS) is about 100RMB per month, while a common doctor in a municipal-level hospital gets 400 to 500RMB's monthly bonus. The managers argued that the hospital needs to find more effective ways to reward those who work hard, efficiently and with high professional skills, if it is to enhance its productivity.

Regulations

There was wide agreement in the survey and the interviews that continuing attention to having clear and agreed rules about how to do things is very important. Some respondents spoke of the benefit of new rules and regulations which have been established but in other areas there is still a lack of documented and authorised rules about how things should work. Even where there are rules written down there are difficulties in achieving compliance.

Survey respondents spoke of the importance of rules and regulations in response to questions about recent improvements (Question 12), priorities for management reform (Question 15) and difficulties and frustrations (Question 17). (See Table 6.12, Table 6.13 and Table 6.14). Over 22% of the 242 survey respondents cited clearer rules and regulations as examples of recent improvements in hospital administration (see Table 6.12). These managers have made efforts to establish and enforce rules and regulations in their own hospitals and departments.

Thirty percent of the interviewees (mainly from the departmental level) described how they are trying to manage their departments through good regulations. They are gradually regularising the hospitals' work and making efforts to enhance the establishment and enforcement of rules and regulations. These efforts have proved helpful to the hospitals' or departments' work.

The Anaesthesiology Department of the First Affiliated Hospital, for example, has carried out strict rules for work attendance. The hospital stipulates that anaesthesia has to be finished by nine o'clock sharp so that surgery can start, which means no late-coming is permitted. The managers use deduction of bonus to penalise lateness: 5RMB for first-time lateness and 10RMB for the second time. The deductions are accumulated in this way. One of the doctors was once fined 500RMB in one month for continual lateness. Now lateness has been reduced and operations can start on time.

There are only 12 nurses in the Surgical Department of Abdominal Tumours, in the Third Affiliated Hospital, which is just enough for the arrangement of work shifts, with one person left for emergency. In the past, the nurses often declined to come for their shift simply by phoning the head, which greatly affected the department's nursing service. So the head discussed with the nurse head how to rectify the situation. They

established a formal set of rules and regulations which enabled them to penalise some troublemakers to strengthen their sense of responsibility. Since then, no one has ever resorted to the old practice.

Nineteen percent of the survey respondents (see Table 6.13) mentioned the lack of rules and regulations in their work places as difficult problem areas:

> *The hospitals have no adequate management or supervising system. The present situation in the hospital is that good workers do not get rewarded, nor do people who are remiss get penalised. (department head)*

> *People are lazy at work and the work efficiency is very low. There are no quantified goals or clear rules for penalty and reward, so there is no incentive for work. (general administrator)*

Thirty two percent of survey respondents mentioned the need for improved rules and regulations as the 'single most important management reform needed' (70% of the 109 respondents listed in Table 6.14).

Three of the 20 interviewees also emphasised the importance of management by rules. They spoke of the need to develop and implement good rules and regulations; to manage the hospitals or departments by sound rules, which most people can accept and conform to. Many of the interviewees spoke of managers who have devised rules and regulations, such as bonus distribution plans, professional training plans, and departmental and ward inspection and attendance rules (including the clearcut rules about penalties and rewards) but such rules are sometimes only written to meet the requirements of the presidential leadership and are never implemented.

Managers commented that it can be very difficult to put rules and regulations into action. Managers are working in a complex system of interpersonal relationships, obligations and alliances. In the past *guangxi*[20] has been a basic part of personnel management, partly because the hospitals have not had explicit rules to guide personnel decision-making. "If the manager penalises someone, it may mean that he/she will be

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20. Guanxi: Personal connections, the term is used in Mandarin. *Guanxi* is very important in 'getting on' in Chinese society, even if technocratic qualifications have become more necessary. 'Who you know' is still very useful in one's working life and career (Warner, 1993).

hated for ever" (Party secretary). The managers hope that rules or regulations can be established and implemented to manage the hospital instead of having to work through interpersonal relationships and they hope that some power can be given for them to reward those who work hard and penalise those who are lazy.

Interpersonal relationships

Managers were asked to list the problem areas in their present position (Question 17). Interpersonal issues were listed by 27% of respondents (see Table 6.13). Respondents from the presidential level and respondents from the Third Affiliated Hospital expressed strong concerns about this issue. The managers felt that too much of their time was spent in dealing with interpersonal relationships, including with superiors, subordinates and government officials.

A few interviewees recognised that working with people is an essential part of good management and properly done it can have a positive effect on the work efficiency in the department and the whole hospital. Interpersonal relations are an issue the managers have to face every day. There is no escape from it. For example, if the doctors are depressed because they failed to get their senior professional titles, the departmental head must try to appease their discontent as well as create good working conditions to help them acquire better medical skills. "Dealing with people requires a selfless heart and good interpersonal skills."

Relationships between supervisors and subordinates

Thirteen questionnaire respondents indicated that there is a lack of effective communication between them and their superiors or subordinates (see Table 6.13). Some departmental managers and general administrators commented that every new leader of the hospital brings with him some ideas for change. From their point of view there did not seem to be any logic about the new directions and many middle level managers are bewildered by (what they see as) unpredictable change.

> *We do need leadership support and supervision but too many changes make it harder to manage the department and the medical staff and staff become more resistant to managers' orders. This is the worst thing for a departmental manager. (departmental head)*

On the other hand, several presidential respondents felt that they are not appreciated by their subordinates for how hard they work and for their leadership ideas.

> *It pains me so much. I wish to free myself from distraction and chores so I can strengthen our management. (president)*

Nurses and doctors

The relationship between the departmental head and the head nurse is very important in the coordination of management in medical and nursing work. Twenty percent of interviewees (two doctors and two nurses) observed that conflict between departmental heads and their corresponding head nurses are very common in their hospitals.

> *We are most afraid of dealing with the nurses. They are too meticulous and short-visioned. They fuss over trifles and expect be get over-rewarded. (departmental head)*

> *The main source of the conflicts is the heads of the department. They do not listen to us. They think they themselves are great and they make decisions on the bonus distribution. Actually, their managerial skills are low and they do not know how to get along with people. (head nurse)*

The department heads suggested that when a head is in conflict with a head nurse in the department, the hospital should not force them to stay in the same department. The hospital leaders should try to reconcile their relationship by arranging a new appointment for one of them so as not to affect the department's work.

Families

Six interviewees spoke about problems associated with several people from the same family working within the same hospital. This can make administrative work quite difficult:

> *The treatment of one person may involve many others and it is not easy to deal with. Sometimes it is hard to assign a job to employees or to bargain with people. It costs us a lot of energy and time in coordinating these relationships, and causes low efficiency at work. (Party secretary)*

Considerations

Six interviewees stated that the country's work system involves complex interpersonal relationships, which leads to great difficulties in hospital management.

> *The hospital leaders have to be involved in some bad social practices like feasting; meeting demands from superior departments for financial assistance; paying relationship fees in doing official business. All of these take money from the hospitals. If the hospitals refuse to comply then we don't get things done. It is a big headache for us. We can do nothing about it. (general administrator)*

> *If there were no such troublesome dealings, then the president alone would be able to make decisions without incessant discussions. That would mean greater efficiency and more speedy resolution of difficulties. When a lot of time is wasted coordinating interpersonal relationships, decisions about the hospital's work are hindered. (vice president)*

Quality management

Hospital managers saw quality management as a very important objective as well as a very important factor contributing to the image of their hospitals. *Zhi liang di yi* ('quality first') is a very common slogan; many managers are very committed to it and try to strengthen quality management within their hospitals. Of the 242 respondents, 40% listed improved quality as one of the main improvements in their hospitals (Question 12) which were coded under the coding heading of 'practice' (Table 6.1). Table 6.15 shows the two main areas in quality management where improvement had been achieved.

In the interview study six managers cited quality of care as an area of improvement and an equal number cited it as an area of deterioration in management practice (Table 6.2).

Of the 242 respondents, 27% of the comments within this category were suggesting more effective quality control. The respondents from the Second Affiliated Hospital and the presidential and departmental managers were particularly common in this group. There were 114 responses in total which were coded and analysed.

Seventeen percent of respondents referred to strategies to improve service manner; particularly respondents of the First Affiliated Hospital and the departmental managers. Presidential respondents mentioned this issue less commonly.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any quality of care improvements	**40**	**38**	**41**	**39**	**77**	**36**	**38**
Quality control[21]	27	23	31	26	54	27	22
Strategies to improve service manner[22]	17	21	14	13	23	16	16
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.15 Improvements in quality management as one of the main improvements in hospital management over the last five years (Q12). The aspects of quality management are tabulated against the proportions of respondents citing improvements in those areas.

Quality control

As is evident in Table 6.15, quality control of medical care and nursing is a concern of hospital managers. Managers at different administrative levels try various strategies to improve it. The presidential leaders from one hospital indicated that the rate of adverse care outcomes had increased; one of the main reasons was diminished attention to quality of care, in particularly the quality of rescue of critical patients. The hospital is now trying to enhance the quality of care through a range of measures.

21. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *quality control* are exemplified by: 'Standardised and programmed management in medical treatment and service have reduced medical accidents and disputes in our hospital'; 'We have tried our best to give patients a good medical environment and provide good quality medical treatment'; 'Increasing medical treatment level and service requires that when emergencies occur, timely treatment must be provided'; 'The quality of care has been enhanced through some meaningful measures.'

22. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *strategies to improve service manner* are exemplified by: 'Party and League members wear identification badges so that they can be recognised by patients and their families'; 'Emphasis on medical ethics education to all staff members to encourage everyone to increase their philosophical commitment'; 'We encourage smiling service manner among the nurses and encourage doctors to receive patients warmly no matter what kind of patients come to see us'; 'We pay more attention to the nursing attitudes and medical morals, starting from the department head.'

An emphasis has been placed on reorganising the Emergency Department. "The Emergency Department is the major problem. It is the most important part of the hospital, because it deals with patients in the most direct way and the quality of its emergency treatment is essential to the patient's survival." (president). To strengthen the hospital's emergency treatment, the hospital has upgraded the staff, assigning some highly-skilled nurses with a strong sense of responsibility to the Emergency Department. At the same time the Department has been divided into two sections, the Surgical Section and the Section of Internal Medicine. In this way accountability is strengthened and quality control of patient care enhanced.

Meanwhile, the hospital leaders are revising the rescue procedures with a view to strengthening the awareness of emergency procedures among the staff. The hospital has added a first-diagnosis responsibility regulation to the hospital's "Rules and Regulations for Staff Members". This means that the first-diagnosis doctor has to take full responsibility for the initial medical assessment of the patient, write on his medical record, devise a treatment strategy, and organise further consultations. Secondly, the hospital stipulates that treatment for a complex case shall be conducted first by the department pertaining to the problem that directly threatens the patient's life, with the assistance of other less critical departments. This avoids the shifting of responsibilities among different departments. Increased authority has been given to doctors of the Emergency Department by the president and they now have the right to give orders to different departments in regard to urgent treatment. In the case of critical patients, they need to report to the administrator on duty, who then will come to help with the rescue and report its success.

Some presidential leaders also participate regularly in group consultations for critical patients; attend death and complications meetings; review medical records; and generally assist departments to solve difficult medical problems. The leaders also rely upon quality indicators, including the diagnosis accuracy rate for in- and out-patients, rescue success rate and mortality of critical patients, operational and pathological diagnosis accuracy rate, bed turnover rate and average length of stay[23]. They report this information to the whole hospital each month so as to encourage departmental

23. See Chapter Five for a critical discussion of these data

heads to strive harder for excellence and to direct assistance to the departments that are lagging behind.

At another hospital there is concern about the decreasing numbers of attendances at the OPD. "Several big hospitals have experienced a decrease in the number of outpatients attending recently but the decline in our hospital appears to be outstanding." (vice president). In response to this problem the leadership of the hospital has taken a number of measures directed to enhancing the hospital's reputation and improving medical quality and service attitude. The presidential leaders lay emphasis on ensuring the accuracy of diagnosis at the OPD and the hospital's reputation by inviting back retired doctors with professorial titles. "Previously the OPD was staffed entirely with junior medical staff and patients did not trust them; they only came to tell doctors what medicines they want to be prescribed." (vice president). The hospital already has some medical professors seeing outpatients on Monday and Saturday but patients cannot see experts everyday. "The OPD work is not as good as those in other hospitals. The so-called 'celebrity effect' still works in actuality, especially by attracting more patients." (departmental head). It was emphasised by the hospital that there are at least some doctors with professorial qualifications seeing patients in the OPD everyday.

The hospital is also aiming to improve the level of the nursing service. Nurses are given training which encompasses the hospital's expectations including a set of rules for inpatient care. This has proved very effective. In addition, the hospital is examining models of best practice in nursing care overseas which could be implemented locally to give holistic, systematised nursing care to patients. The hospital is keen to improve nursing care to make patients feel more at home when they are admitted.

The hospital leadership has also been more explicit about its expectations of doctors with respect to attendance of patients. A new set of rules has been promulgated for doctors of three ranks (resident physicians, physician-in-change or team leader of a disease section, professorial doctor) including, for example, rules about how frequently they should see their patients. Improved supervision by the senior doctors contributes to greater accuracy of diagnosis and better treatment outcomes.

In one hospital there has been a focus on quality control of nursing and the hospital has set up a special quality control team led by the head of the Nursing Department. This team operates through more specialist teams dealing with basic nursing, technical procedures, sterilising isolation, and ward management. The hospital conducts quality checks in accordance with the Provincial Health Bureau's (PHB) requirements. The Nursing Department undertakes inspections on a rotating basis, focussing on different issues each month. The hospital runs annual training classes focusing on the requirements of the PHB for hospitals of each level.

In regard to ward management, the Nursing Department undertakes random checks each month with nurse supervisors assessing departments other than their own. Such ward inspections are conducted in accordance with the protocols set out by the quality control team. The Nursing Department arranges hospital-wide discussions on prevalent problems:

> *Should any illegal activities be discovered the Nursing Department would introduce penalties according to the hospital's regulations on rewards and punishments. (head nurse).*

The Nursing Department also undertakes a monthly evaluation of nursing documentation. Those departments which fail to reach the required standards, according to the hospital's rule, will get their contract bonus deducted.

Interviewees advised that these strategies for improving the quality of care have been highly praised by both the medical staff and patients. The managers are hopeful that these measures will contribute to enhancing the quality of care in their hospital.

Strategies to improve service manner

Many managers recognise that quality of care and patient satisfaction are significantly influenced by the manner of the medical staff. Bad service manners tend to give patients the impression of poor medical skills.

From both the survey and the interviews it is clear that the problem of poor service manners is common. Although there are many reasons for this problem (such as inadequate medical staff numbers in some departments which we will discuss in Chapter Eight) many informants suggest that the attitudes of medical staff toward

patients is one of the main factors. Accordingly, all the hospitals are drawing attention to this issue and taking steps to improve it.

In all hospitals a strong emphasis is being placed on medical ethics education by organising training for staff members to enhance their sense of honour about the hospital and the department. Staff are urged to pay more attention to medical morality starting from the department head and head nurse. New campaigns have been mounted directed at: 'refusing the red bag'[24] from patients, refusing to go out to eat with patients[25] and other practices. The hospitals are encouraging smiling service manners among the nurses to upgrade the service quality.

Some examples of the steps taken by the First Affiliated Hospital to improve the hospital staff's service manner were cited. The hospital has opened a bulletin board of civil service on which there are photos of every staff member so that these people feel compelled to work well with the supervision of others. "After one month's practice of the bulletin board, a good result was received, it reduced the number of patient complaints" (Party secretary). Such educative propaganda is believed to set up good examples which will encourage everyone to develop high standards to upgrade service levels. The hospital identity cards also display prominently staff members' status regarding whether or not they are Party members or League members. This is believed to encourage them to provide leadership in delivering a good service.

The leadership of the Second Affiliated Hospital argues that standards of nursing care are critical to delivering excellent patient care. If the patients are nursed well, they will feel relaxed and happier. They will be pleased with the hospital. "No matter how successfully the operation was done, if, after the operation, there was nobody to take care of the patients and the nurses are rude, all you have done will come to nothing" (vice president). It is because the leaders have realised this they are placing increasing emphasis on the training of nurses, both addressing their professional level and improving their service manner.

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24. The red bag: money is wrapped by red paper.

25. Eating with patients: doctors and nurses expect that patients or their families will invite them to have meals after an operation or in some other process of patients' treatment.

Financial management

Eighteen percent of respondents identified financial management[26] as an area where there has been substantial improvement in their hospitals. However, 17% of respondents indicated that among the areas most in need of reform were improvements in financial management[27] (as shown in Table 6.8). Five interviewees (25%) cited financial management as an area where improvement has taken place over the last five years as well as being an area in need of reform.

China is in an age of economic change and hospitals are facing problems due to economic pressure. Perhaps the most pressing is the need to generate sufficient revenue through user charges to cover expenses and hospital development and to compensate for the declining proportion of expenses covered by government grants. Many managers indicated that the nationwide economic reforms and user charges have brought increased revenue but also some problems for hospitals. For instance, the CMRS lays emphasis on revenue raising and bonuses but since the remuneration of medical staff is low in comparison with some other occupations in China there are still pressures on medical staff to look for ways of enhancing their incomes (discussed further in Chapter Eight). Many illegal things have occurred under the 'cover of reform'.

In speaking of improvements which had been implemented and the need for further reforms the hospital managers (in both the interviews and on the survey responses) focussed mainly on the problem of controlling illegal commissions (purchasing medicines, extra tips from patients and referrals of patients to other

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26. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *financial management* are exemplified by: 'We have set up some managerial rules and systems to require that doctors and nurses refuse the 'red bag' from patients'; 'We check the discharge bills for each patient. If we charge patients more than the standard rate, we must refund it'; 'We have instituted some measures designed to prevent the payment of commissions by other hospitals for the transfer of patients'; 'We have a principle based on education to prevent receiving illegal commissions through selling medicines.'

27. The kinds of responses to Q15 (areas needing managerial reform) which were coded as reform of *financial management* are exemplified by: 'Reform of financial management is very important. However, it is very difficult to deal with this problem'; 'Controlling illegal commissions in hospitals is necessary'; 'Doctors and nurses should not have a direct financial relationship with the seller'; 'The government should have clear and specific rules controlling financial problems.'

hospitals). These problems cause heavy burdens on patients and the loss of hospital revenue, as well as having a great impact on the quality of medical and nursing care.

Medicines

Pharmaceuticals are manufactured in factories in both the state owned and privately owned sectors. Pharmaceuticals are purchased for distribution from the factories by pharmaceutical companies mainly operating as profit making enterprises in the state owned sector. Pharmaceuticals can travel a number of different paths from manufacture to patient, not all of which are legal. The legal path is from the pharmaceutical factory, to the wholesale company to the hospital pharmacy which dispenses drugs (for a fee) to patients on presentation of a medical prescription. However, in some hospitals the practice has developed of individual departments (and individual doctors and nurses) purchasing drugs directly from the sales persons of the pharmaceutical factories and companies and on-selling directly to the patient.

With the economic reforms, state control over pharmaceutical prices has been relaxed and there are big profits to be made, particularly in the area of new drugs (which are often the most expensive). Pharmaceutical factories and companies have a strong incentive to encourage doctors to prescribe more of their drugs. In order to encourage the doctors to prescribe more to their patients, the manufacturers and the sellers "hang around the department all day and use discounts to persuade" heads of departments and individual clinicians to buy direct. Practices such as the payment of prescription fees, discounts to departments and commissions for interpersonal advertising are said to be common.

The state forbids secret sales commissions and classifies prescription fees, sales promotion fees, tips for routine jobs, and interpersonal (word of mouth) advertising fees as bribery or embezzlements. The State Education Commission has regulations which provide for inspection and supervision but limited mechanisms for implementation:

> *The hospitals have also set up strict rules forbidding departments from buying drugs directly from pharmaceutical factories or companies and selling the medicines directly to patients themselves. The hospitals implement these rules through preventive measures and education. The hospitals emphasise*

prevention through education by the presidential leadership and by the managers of the departments where these problems are most common (including the pharmaceutical department, equipment department, fundamental construction department, personnel department, and financial department). (Party secretary)

All of the clinical departments and the administrative sections are studying related policies so as to set up their own specific regulations. The aim is not to penalise people but to prevent problems from occurring so as to eliminate the state's loss as well as personal wrongs. The hospitals have now clearly stipulated that doctors and nurses in the clinical departments are forbidden to purchase medicine personally for patients. If any department purchases medicine, it breaks hospital rules and the hospital stops them firmly. (deputy Party secretary)

The hospital does not allow pharmaceutical factories or wholesalers to give sales promotions fees to the doctors or nurses. Once they are caught doing this they will be stopped and the hospital staff will be seriously dealt with. For example, one head nurse of the ... Hospital sold the medicine herself, the leadership discharged her from her position. (Party secretary)

It also causes contradictions between the doctors and the nurses. Doctors do the prescription, the nurses have to take the medicine back and do the injection but the money will mainly go to the doctors. Doctors in the ... Hospital prescribing one bottle of medicine can get several ten RMB as reward money. The nurses feel this is not fair and this impacts on the quality of medical and nursing care. These practices are a major threat to the well being of the hospital. (head nurse)

When it comes to the purchase of medicines, almost all the leaders from all hospital pharmaceutical departments in Yunnan Province have committed wrongs of different degrees. Some of them have even been arrested. The equipment departments have similar problems. (deputy Party secretary)

If it is well controlled, the purchasing could easily save over a million RMB per year in one hospital. (general administrator)

The hospital leaderships rely heavily on senior staff setting a good example, for example, some presidential leaders have refused invitations to operate (for a fee) in outside hospitals or clinics.

> *The leaders have to be responsible to their hospital. If they go, the department heads would say that the presidential leaders went, why should they not go? Then the leaders will not have the power over others. The leaders did the operations in the hospitals. Often after that, patients would give them the extra tips. They tried their best to persuade patients to take it back. If they insisted, the leaders would give the money to the Party Secretary's Office and asked them to return to the patients after they have recovered and discharged from hospital. Only in this way, when leaders do it themselves first, can they have the right to speak about what others do in the lower level. The hospital should put more effort into the education of middle level managers. (vice president)*

Another strategy for controlling this problem which was suggested by several managers in the interviews was that the Departments of Pharmacy and Equipment should be made more accountable for their purchasing practices. These departments should be required to maintain adequate records and be able to demonstrate the integrity of their practice. This would also contribute to maintaining product quality and lower prices. The clinical departments should also keep appropriate records of expenditures on medicines so that their practices can be audited.

Nonetheless many managers were sceptical about the effectiveness of these controls. Managers acknowledged that the government and the hospital have made relevant policies and rules with respect to the purchasing of medicines and medical equipment. However, these may be a bit too late as the problem involves many people and is proving hard to eliminate:

> *This is a serious problem not only for hospitals in Yunnan Province, but for hospitals all over the country. (deputy Party secretary)*

Although the government has established rules making it illegal for hospital staff to take commissions it is nevertheless legal for pharmaceutical factories and the wholesalers to pay commissions. This is not regarded as bribery. But it is regarded as

bribery when the promotion fee goes to a hospital employee. In fact, the payment of commission and the taking of the bribe are contained in the same act. From the perspective of the hospital leaders, it is unfair to punish individual hospital staff but not the drug company or pharmaceutical factory. The staff of the hospitals find it very unconvincing and so it is hard for the leaders to make decisions about punishment.

There are other difficulties facing managers in dealing with this problem. If it was discovered that a salesman used illegal means to sell medicines in a hospital, the hospital would respond by refusing to buy medicines from that manufacturer in future. However, if the salesmen were then to make direct contact with the doctors avoiding the hospital administration and pharmacy, the practice might continue undetected and even where it is suspected it can be very hard to get firm evidence. Even if the evidence were available it may be difficult for the managers to punish staff because so many members of their hospitals are involved in it. The situation is even more uncertain in view of the ambiguities in government policy in this matter.

At this time the hospital leadership is waiting clearer guidance from the Provincial Health Bureau. Meanwhile, they can only propagandise among the staff to warn them against it. But as there is ambiguity in government policy about this problem, administrators are also confused and find it very difficult to find practical solutions.

Other problems

Whilst commissions and other irregularities in the procurement of pharmaceuticals were the issues of most concern to the managers in this study they also mentioned a range of other problems such as the payment of introduction fees to doctors by private hospitals. This practice was mentioned many times by managers and managers are concerned that it reduces the (originating) hospital's bed occupancy and greatly affects the hospital's reputation and revenue. The hospitals have started to set out rules to stamp out such practice, for example, if a doctor or nurse is discovered to have been involved, his/her promotion may be affected. However, the rules have not eliminated these practices so far.

Another problem is that doctors and nurses often receive tips from patients and sometimes even demand tips. This appears to be more common in surgical

departments. Such practices have a negative effect on the hospital's reputation. The hospitals all stipulate that tips from patients are forbidden.

Introduction of new technology

Thirteen percent of respondents (31) regarded the introduction of new technology as one of the main improvements in hospital administration over the last five years (Question 12, see Table 6.1). There were 34 responses in total which were coded under this heading and analysed. Ten percent of respondents (as shown in Table 6.16) mentioned the development of new methods; particularly respondents from the Second Affiliated Hospital and respondents from the departmental level. The frequency of mention in this category was lower in the Third Affiliated Hospital. Five percent of respondents cited the introduction of new equipment, particularly in the Third Affiliated Hospital; but less frequently cited by departmental respondents.

Four of the twenty interviewees mentioned the introduction of new technology as one of the most important improvements in their hospitals and none spoke of deteriorations in relation to this issue (see Table 6.2).

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any improvements in new technology	**13**	**15**	**9**	**18**	**31**	**12**	**10**
Development of new methods[28]	10	14	7	9	25	9	9
Introduction of new equipment[29]	5	6	3	12	33	2	7
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.16 Introduction of new technology as one of the main improvements over the last five years (Q12). The aspects of introduction of new technology are tabulated against the proportion of respondents citing improvements in those areas.

Development of new methods

Managers viewed the introduction and expansion of new technology as very important for improving the quality and efficiency of medical care, particularly for university hospitals if they are to take a leading position in academic fields. The managers emphasised that some of their work in developing and introducing new technology is of leadership status in the province, in some cases across the whole Southwest area and even at the national level.

For instance, in the field of liver transplants, the Second Affiliated Hospital is cooperating with Hong Kong University, and the West China Medical University and is receiving technical support from them. The Cardiovascular Department of this hospital is adopting the technique of radio frequency therapy for cardiac arrhythmias. They plan to adopt balloon angioplasty techniques for coronary artery and valvular stenosis.

28. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *development of new methods* are exemplified by: 'The number of new medical techniques in our hospital has been increased in recent years'; 'We have introduced and carried out some new methods of nursing care in our department'; 'We have set up new laboratories and developed new professional methods'; 'We have paid attention to the development of new clinical techniques and methods each year.'

29. The kinds of responses to Q12 (improvements in hospital administration) which were coded as *introduction of new equipment* are exemplified by: 'The leadership of the hospital has introduced many new items of clinical equipment. This has been beneficial to the development and the provision of better medical services'; 'We have installed some new equipment and facilities'; 'In recent years, the hospital has collected money through providing more services and installed many new items of

Andrology as a new discipline is now getting more attention in China. The technique of scanning the corpus spongiosum and measuring blood kinetics using technetium 99 is being pioneered in China by the Andrology Department of the First Affiliated Hospital. The department is also pioneering new techniques in the treatment of prostatitis which are less painful and less expensive than the conventional approach. The manager of the department commented that many patients are attracted to this hospital because of these new developments. "It has enhanced social benefit as well as the hospital's own revenue" (departmental head).

The open way of treatment for mental patients used by the Psychiatry Department of the First Affiliated Hospital is also said to be pioneering this field in the country.

Many other managers gave instances of new advances in clinical practice and technical innovations which they had introduced and which are at the leading edge in the province and in some cases in the country.

Some managers suggested that the hospitals should pay more attention to developing new clinical techniques and methods and support laboratory research. The hospital should implement incentives to encourage research and reward those professionals who developed the new techniques.

> *Once more new techniques have been developed the medical level of the hospital will be improved and the hospital's influence in the society will be greatly expanded. (departmental head)*

Development of new equipment

> *In recent years, the First Affiliated Hospital has installed a number of major items of new equipment such as computerised tomography and magnetic resonance imaging which contribute to improved quality of care and efficiency. (vice president)*

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equipment'; 'The hospital's hardware has been developed every year.'

The leadership of the Second Affiliated Hospital is also determined to invest in large equipment. This hospital presently has ordered a whole body CT machine, advanced X-ray equipment and an advanced extracorporeal circulation machine.

The managers of the Laboratory Analysis Department, in the First Affiliated hospital, are enthusiastic about the introduction of their new equipment. The department had decided to buy a 7150 Hitachi machine at a cost of over US$100,000. The managers believed it would greatly enhance the department's work efficiency. However, the Equipment Section of the hospital did not agree to it. After considerable debate the managers demonstrated the advantages of the machine and it was purchased (with the president's support). Now this machine is used for all of the routine biochemical tests. In the past, the full panel of biochemical tests required five 10ml phials of blood; now it takes one phial of 2ml to finish all the biochemical tests (with the exception of 3ml for iron tests). This has reduced patients' pain, and nurses' workload as well as the department's workload. Without this machine, the staff would not be able to complete their present workload even if the department had more staff.

> *The Provincial Hospital has three automatic biochemical analysis machines. They have to work overtime if they receive too many samples. Though our machine is more costly, the department can earn back its cost within one year, and the machine will last for at least five years. This proves the importance of new technology in developing the department and increasing its revenue. Now other hospitals are following this example and are buying the same machines. (departmental head)*

Another example from the Laboratory Analysis Department concerned the installation of computers in the laboratory and the replacement of the manually based system for documenting results. Work like registration, inserting reference values and checking reports is now done by computer, using one third of the staff time previously required to operate the manual system. Computers prevent copying mistakes associated with transcription of results by hand. Work efficiency and quality have been increased. The laboratory used to have 12 people handling over 1000 items per day. Now it needs only six people to complete over 2000 items per day. The department is now able to provide a same day service to the clinicians.

The managers argue that the use of computers has reduced staff workload and improved services to patients. Because they are under less pressure the service manners of staff have also improved.

Time management

Time management was listed by the survey respondents as one of the problem areas in their present positions (Question 17), 17% of respondents making some reference to it. There were 43 comments in total which were coded and analysed. The presidential respondents in particular emphasised this problem (See Table 6.6).

Of the 242 respondents, 10% complained of too many administrative chores, and seven percent of respondents mentioned the problem of too many meetings. The distribution of responses relating to the problem of time management is shown in Table 6.17.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Respondents mentioning any problems in time management	**17**	**19**	**19**	**8**	**62**	**14**	**16**
Too many administrative chores[30]	10	11	11	5	41	7	10
Too many meetings[31]	7	9	8	3	38	9	5
Total number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 6.17 Perceptions of problem areas in relation to time management (Q17). The problems of time management are tabulated against the proportion of respondents citing problems in this area.

30. The kinds of responses to Q17 (frustrations and difficulties in managerial positions) which were coded as *too many administrative chores* are exemplified by: 'We have been involved in miscellaneous affairs every day, no time to think over the development of the department's work'; 'We are busy all day thinking about the distribution of bonus and the financial problems in the department'; 'In the department, there are so many trifling administrative jobs. We cannot spend enough of our energy and time on medical work and department development'; 'There are too many formalities, such as filling in forms, writing reports and checking hygiene and cleanliness. It takes a lot of my work time.'

31. The kinds of responses to Q17 (frustrations and difficulties in managerial positions) which were coded as *too many non-productive meetings* are exemplified by: 'The hospital has too many meetings which is a waste of time'; 'We dislike repetitive meetings which are no use at all'; 'Too many meetings is really boring. We have not enough time to think about how to systematically do the managerial work'; ' Many meetings which didn't solve our real problems.'

Too many administrative chores

All of the interviewees spoke about the amount of time that they have to spend on repetitive, trivial and unimportant affairs. They complained that these tasks cost them a lot of energy and reduce their work efficiency. The managers indicated that much of their time is mainly taken up with ongoing operations and routine administrative tasks. They devote as much as half of their time in solving immediate problems and removing obstacles as they arise. They find it very difficult to make time for planning and development work.

It is usual practice for the medically trained managers to remain clinically active. This is particularly difficult for the presidential leaders, leaving them with less than 20% of their time for effective hospital management, such as strategic management, planning, and adaptation to the changing needs of the environment.

Most of the presidential respondents stated that they often spend whole days dealing with interpersonal relationships. For example, if someone is not selected for promotion, he or she may approach the leadership to contest the decision. If a staff member chooses to send their child to a school beyond their dedicated district a fee will be charged and the staff member/s may approach the leadership of the hospital asking for the hospital to pay the child's school fees.

> *Such things cost at least 40% of our time and have almost become the major part of the leaders' work. (vice president)*

There are formal reporting relationships between the departmental managers and hospital managers but many people bypass their department heads and come to the hospital-level leadership to discuss their problems. Hospital managers complain that their work is 'constantly disturbed' by such interruptions although most of these affairs are not within their duties. As a result, the departments involved do not know what is happening, problems are not solved, and the leaders' time is wasted:

> *But you have to see them, it's our system, or you would be criticised for your attitude as a communist cadre. (vice president)*

Many departmental managers complained about routine jobs, such as sanitary cleaning checks, writing work summaries and other reports and department work records which were done only for official inspections.

Dealing with the bonus allocation and other financial problems were further difficult issues for managers. Many departmental managers complained that after the implementation of the CMRS for departments, the head of department or head nurse became in charge of the department's bonus distribution and finances. Everybody is very concerned about these issues and the departmental managers have to spend time and energy every day allocating bonuses and trying hard to maintain a balance among the staff.

Managers have to deal with financial issues in their departments but generally do not have the necessary training. For example, there are instances where patients may leave without paying for medications used or treatments or tests. Collecting outstanding debts can be very difficult and in many cases the money owing will not be collected. "All of the work done by the department comes to nothing" (departmental head). The heads of departments have to deal with problems like this frequently:

> *Hospital financial management should belong to the financial accounting department not to the service department where the doctors have to take charge of it. We spent a lot of time on such economic problems and cannot spend all of our energy and time on medical work. This is a significant waste of hospital resources. (departmental head)*

Interviewees recognised that if they could be spared more time and energy for strategic management, hospital development would benefit. They feel very aggrieved about this.

Too many meetings

The managers who were interviewed expressed mixed feeling about meetings. Managers acknowledged that some meetings are constructive in terms of gaining and disseminating information, solving problems and building team work. But senior managers have to spend a lot of time attending non-productive meetings, meetings which could have been delegated to others or meetings called for communicating information which could have been disseminated in other ways. For example, the presidential administrators have to attend all sorts of meetings at KMC, at the Provincial Health Bureau, and other meetings dealing with issues such as family planning, security, the cleaning of hospital surroundings and tree-planting:

Some meetings at KMC have nothing to do with us, but we are compelled to attend. Sometimes we have to attend meetings with the same message simply because they are given alternatively by the Provincial Health Bureau and KMC and we are counted as a leader by both units. (vice president)

Some meetings are unimportant, but we have to attend. We dislike empty talk and meaningless meetings that solve no problems and just waste time. These waste at least two days per week. (Party secretary)

Departmental managers also complained that the hospital has too many meetings, sometimes taking as much as three afternoons per week of their time. Many meetings are called primarily to communicate information down the administrative hierarchy. Often this is information which may be only marginally relevant to some of those required to attend or could have been equally well disseminated through printed media:

These meetings waste too much time and sometimes do not solve problems at all. No one likes to listen to those messages. (departmental head).

Excessive, repetitive meetings are no use at all; they are a waste of time. (head nurse)

The managers considered that such meetings distract them from more important issues in their work and affects the work of their departments negatively.

Other aspects relating to the practice of hospital managers

Managers are also involved in managing research, managing teaching and planning. About 10% of survey respondents (25 respondents) and three interviewees mentioned improvements in the management of research and teaching among the recent improvements in hospital administration. One interviewee cited the management of research in speaking about 'deteriorations' (survey Question 12 and interview Questions 9 & 10, see Table 6.1 and Table 6.2).

In responding to the survey question concerning 'frustrations and problem areas' (Question 17), six percent of respondents made comments related to hospital planning (see Table 6.6). Three interviewees also identified a lack of strategic planning as one of the most difficult issues facing them personally with respect to the management responsibilities of their job (Question 3).

Managing research

Managers mentioned that research management in their hospitals has been given some attention in recent years. Some measures have been implemented to encourage medical staff to undertake research.

The Ministry of Public Health, Provincial Health Bureau and the hospitals all allocate fund to support research. The hospitals have been increasing funding to research projects recently.

Many departments in the First and Second Affiliated Hospital seek to encourage researchers by linking research work to bonus distribution. Departments commonly allocate 5-10% of their monthly bonus to a research fund. Whenever a staff member gets an article published or wins a research award, the department will reward his/her achievement.

Research management includes supporting staff in preparing research applications. A special section has been set up in the Second Affiliated Hospital to help professionals apply for research project funding; this enhances the enthusiasm of the medical staff for doing research.

Managers in the Second Affiliated Hospital claim that the hospital is in the first row in the province with respect to research productivity compared with the other affiliated hospitals and the provincial hospital. In 1995, the hospital had seven projects which gained awards, among which were some which gained awards at the Ministry level. The Neurology Department claims to have published the greatest number of articles of all units in the hospital in 1995. It contributed 30 articles in 1995, over 10 in 1994, and only two in 1993. The department also has obtained three project grants through the Provincial Science Commission over the last five years.

The head of Andrology department, the First Affiliated Hospital won the title of Pioneer in Science and Technology of Yunnan Province. The department has been awarded a 200,000RMB grant through the research fund of the Provincial Science Commission. The manager has the goal of making his department the top research unit of Yunnan Province by the year 2000 and reaching the province's, the country's or the world's most advanced level in medical care, teaching, and research:

A hospital's quality is not judged by its income but by its level of advancement in patient care, teaching, and research. The hospital's research must be at the highest academic level. (departmental head)

The Cardiac Surgery Department has directed attention to encouraging nurses to study issues which are specific to cardiological surgery nursing and to write articles in the field. The head nurse states that she has written three to four articles every year to set an example for the nurses:

We have done quite well in our professional field. This has been highly acknowledged in the hospital. Our research work in nursing ranks the top in the province. (head nurse)

One interviewee, however, indicated that his department (nephrology) faces barriers in developing its research work; these include lack of funds, outmoded research equipment, heavy workloads on doctors and little time for research.

Managing teaching

Most of the managers interviewed stated that university hospitals have a three-fold mission of patient care, teaching and research and that management has to consider all of these elements. Medical knowledge is constantly renewing itself, so teaching of new knowledge to medical students enhances the quality of medical care.

The teaching management in the First and the Second Affiliated Hospitals includes all clinical courses for the medical students of KMC. The teaching sections are responsible for teaching the five-year and three-year undergraduates of the Department of Medicine and courses for the evening school. The department's head is both a professional leader as well as a supervisor for teachers in the hospitals.

In order to improve the quality of teaching, the First Affiliated Hospital has conducted an evaluation, which involved the hospital's senior leaders auditing lectures and keeping monthly records. The hospital has set up a link between teaching and the financial income of departments. If a department has missed one lecture, then the hospital reduces its bonus by 400RMB. The hospital has won the highest score in the provincial-level assessment of teaching hospitals and has also become the champion unit of all KMC teaching units.

Planning

Several of the managers interviewed considered that there was a lack of strategic planning and long-term goal setting in their hospitals. They indicated that hospital managers need to have some prediction about the future, view things from the perspective of development, and work with a strategy. They should have a whole vision of development in their mind. A hospital should clarify its purpose, in the context of China's practical situation, devise a slogan for the 'service of patients', and then strive to carry it out. Yet many managers worry that the hospital management is too focused on income generation without adequate attention to long-term planning for the hospital.

> *The hospital lacks a macro-scope strategy. We simply wait for problems to show up and then try to find solutions. We are content to be the top one in this province, while we are very much behind similar hospitals of other provinces in reality. Our hospital needs to have a long-term development goal instead of flattering itself for the high bonuses. (departmental head)*

Conclusions

The focus of this chapter is on patterns of management practice in the KMC hospitals, as reflected in the data collected through interviews and questionnaire survey. I am seeking to delineate the ways in which prevailing patterns of management practice contribute to shaping hospital performance; I am also interested in the ways in which management competencies and the broader policy environment shape the patterns of management practice observed.

As discussed in Chapter Three, there are different ways of conceiving, describing, and evaluating 'practice'. The most common approaches involve documenting the distribution of managers' time in terms of the practical activities of management or in terms of the various functional 'sectors' of management (finance, personnel, planning ...). The particular way of seeing 'practice' that I am using in this research focuses on managers' purposes, the foci of struggle, achievement and frustration in managers' daily activities. The findings reported in this chapter indicate that the most prominent area of practice (as purpose) of the managers included in this study involves the

management of people. Other important areas of practice are identified as managing for quality, managing resources, managing the introduction of new technology, time management, strategic planning, and managing research and teaching.

Managing people

Using the bonus system to motivate staff

The managers see the motivation of staff as an important element in their practice and spend a lot of time trying to harness the incentives associated with the bonus system; setting up contracts, setting and reviewing goals and objectives, and allocating bonuses to staff members.

Under the contract management responsibility system, hospital managers are encouraged to use bonuses to arouse the enthusiasm of their staff and to stimulate productivity. Some emphasis has also been placed on the use of bonus payments to reward hard work and efficiency and to punish the lazy and inefficient.

The heavy reliance of managers on the bonus system as the way to motivate staff may be related to the limited formal personnel authority (in particular, in hiring and firing) that managers have over their staff (discussed further in Chapter Eight). In such circumstances it makes sense to employ bonuses to the full to motivate staff.

It seems clear that the use of the bonus system has increased activity levels quite dramatically and (in so far as higher throughput reflect increased efficiency and productivity) the use of the bonus as an incentive has improved efficiency. However, it appears that there are also some perverse incentives arise from the use of bonuses. It appears that the heavy reliance on bonuses to motivate staff is focusing managers' and staff attention primarily on maximising revenue rather than also considering the efficient and effective use of resources.

Moving from the rule of man to the rule of law

The findings suggest that managers perceive the setting up of explicit rules and regulations for staff as an important task. This focus needs to be understood in the context of China moving from a command economy to a socialist market economy which depends on the rule of law for some stability in the basic ground rules. The

establishment of clear rules and regulations is a reflection of this move away from the 'rule of man' to the 'rule of law'.

Keeping morale high when staff are overworked and underpaid

It is official policy in China, to pursue a policy of combining both material and non-material incentives (or moral encouragement) to stimulate productivity and growth (Henley and Nyaw, 1987, p. 128). Even with bonus payments the total salary payments to professional staff in hospitals remains very low and managers have relied heavily on various political and ideological education programs to keep staff morale high and maintain staff commitment. They are also trying hard to find ways to improve staff welfare, such as providing housing for the staff at a low cost, and even taking responsibility for the education and employment of their staff children. These high levels of welfare impose a heavy financial burden on hospitals and a heavy workload on managers themselves as well.

Working with *guanxi*, not being controlled by *guanxi*

The findings of this research are consistent with what other literature suggests about the importance of relationships. The term *guanxi* reflects an important part of managers' work life in China (Warner, 1993). Managers operate within a web of personal relationships. In dealing with government authorities, with peers or with subordinates they have to depend upon their personal credits and obligations to achieve their purposes (Child, 1994, p. 151). Stewart and Chong (1991, p. 67) argue that managers in China need to maintain a network of personal contacts in order for their organisations to obtain the resources they need to be able to function properly.

Although the CMRS allows hospitals to have more autonomy in their internal operations and management of finance, government retains control over personnel including recruitment and dismissal and salary levels. Managers are leading a team over which they have limited power and still depend on working through personal relationships in achieving their objectives and overcoming difficulties.

Managers also spoke about the difficulties of working in an environment of multiple conflicting obligations expressed through various interpersonal relationships.

Their task involves not just managing their unit but also managing the incoming pressures and expectations and avoiding damage to important relationships.

Trying to eliminate the payment of commissions

Managers are struggling with the problem of widespread payment of commissions among medical staff.

The hospitals have set some rules for stopping such behaviour but they do not seem to be working very well, perhaps because of factors in the wider policy environment.

The main problem appears to be in the area of pharmaceuticals with commissions being paid to individual doctors and to departmental heads (for distribution to doctors and nurses within their departments) to encourage the prescribing of particular drugs.

The failure of moral arguments and of rules and regulations to eradicate such practices needs to be seen in terms of the wider system issues discussed in Chapter Eight including very low salaries, fixed prices for medical services (fixed well below the cost of production) and relatively lax regulation of pharmaceutical pricing with wide scope for mark-ups at various points in the distribution chain. (I discuss this issue in more detail in Chapter Eight).

Quality management

Improving systems for patient care

Quality control is a major preoccupation of the hospital managers who participated in this study and they are making continuing efforts to develop better patient care systems and to introduce better mechanisms for quality assurance.

One of the main strategies being pursued for better patient care involves access to modern medical technology, through access to modern equipment, the development of specialist units and staff development. This pursuit of quality through modernisation corresponds to the recognition of modernisation as a policy objective across the economy generally.

However, the drive to modernisation in the health care sector is made more complex by parallel commercial pressures. Managers are under strong pressure to attract more patients who can pay and to deliver more services which are not tightly price controlled (and where the price exceeds to cost of production). In both cases new buildings, new equipment and new specialist units can also provide important market advantages. Further, the achievement of high accreditation status is also a commercial advantage and is also linked to the acquisition of new equipment and more specialised units.

Most departmental managers and senior leaders in Chinese hospitals come from the medical staff and in most cases retain an active clinical role. It is perhaps for this reason that there is a strong focus on promoting better clinical practice when they speak about quality of care and fewer references to addressing the system determinants of quality. This may be partly due to the fact that managers have only limited control over these system factors. Nurse managers spoke of introducing ward inspections with a view to improving quality of nursing care whilst also bemoaning the fact that they are forced to organise nursing care around a task-centred model rather than use primary care nursing (or patient centred nursing) for lack of staff.

However, the fact that managers have not received formal management training may also be relevant to the ways in which quality of care is being addressed. Few managers are familiar with the models for quality assurance which have been developed internationally over the last two decades nor do most managers have any training in the basic disciplines of evaluation methodology. All of the hospitals collect aggregate outcome data (cure rates and so on) but the arrangements through which these data are collected cast some doubt on their reliability. In contrast the medical record is not widely used as a tool for screening for quality of care nor more focused studies of particular areas of concern.

Improving service manners

One of the main issues of quality that managers are concerned about is the conduct of staff in dealing with patients. How to improve the service manners of clinical staff and thereby enhance the quality of care generally has become a major issue for the managers.

In trying to encourage improved service manners, managers rely heavily on morality building and medical ethics education. China has a long history of using moral encouragement through ideological and political education to heighten employees' work commitment. Medical personnel, particularly members of the Party and the Youth League, are expected to have a high sense of occupational ethics and revolutionary humanitarianism in healing the wounded and rescuing the dying (Lin and Zhu, 1984, p. 11). Party members are also encouraged to serve as 'role models' to their colleagues. The Party secretaries of these hospital are expected to spend most of their time on this task.

Many managers also spoke of the system issues which make good service manners more difficult to maintain. They spoke of low salaries and inadequate housing (and other aspects of staff welfare). They also spoke of the pressures of heavy workloads in some departments which are particularly understaffed. Some managers spoke about the way in which pressure of worrying about generating revenue can get in the way of a focus on patient care. I shall return to these issues in Chapter Eight.

Financial management

Enhancing revenue at departmental and hospital level

With the reduction in government funding to hospitals and the introduction of the CMRS (under which hospitals are allowed to retain their own revenue) managers face increasing pressure to increase the revenue for their departments and hospitals.

Decentralisation has encouraged a strong sense of responsibility among managers and created new incentives for staff members. Managers appreciate the way in which the CMRS has widened their range of managerial discretion and they spoke of the benefits of this in terms of increases in the volume of services provided and increased revenue.

It is noteworthy that, in speaking about the challenges of financial management, managers did not speak about the challenges of budgeting, monitoring expenditure and controlling costs.

Managing the introduction of new equipment

As indicated above the managers participating in this study are conscious of the challenge of modernisation and development of their hospitals including the introduction of new equipment. However, under the current financing system, with tight controls on budgets and medical charges but relatively lax controls on the prices for services based on modern equipment, hospitals are also under strong incentives to provide more services with a view to generating more revenues (see Chapter Eight). Managers recognise the use of expensive equipment as one of the important sources of revenue for their hospitals and departments.

No managers raised issues of efficiency, effectiveness and appropriate use in discussing the introduction of new technology.

Time management

Suffering unnecessary meetings

Managers complained that they are required to attend too many unnecessary meetings held by higher authorities. Attending meetings is a heavy and time-consuming burden.

It may be useful to make a distinction between meetings which are called with a view to working through a set of issues and making decisions compared with meetings which are called for purposes of moral encouragement and motivational speeches. There are strong traditions in China of holding meetings for the latter purposes and it appears that these are the meetings which are most resented by the respondents in this survey.

However, managers feel obliged to attend because of the possible damage to important relationships which might flow from being unavailable for such meetings. Stewart and Chong (1991, p. 64), in a study of senior managers in Chinese state-owned enterprises, found that managers felt obliged to attend meetings because of the implications for interpersonal relationships. 'A meeting could help to develop an understanding of those who attended, and to exert influence on the others there, and indeed to signal their relationship with the others. In any case, to deal with organisational politics, a senior manager could not afford to absent himself, however

much he disliked wasting time at meetings (sitting in a meeting for three hours to pick up only one piece of information).'

Getting through trivial and time consuming chores

Many managers complained about the time wasted on trivial chores. Departmental managers complained about the time cost of formal routines such as correcting medical records and preparing for accreditation inspections. Senior manager complained more about the number of people contacting them for favours of one sort and another.

The Boisot-Xing (1991) survey concluded that, in keeping with Chinese paternalistic tradition, those working in an enterprise (and their family members) often insist on access to the director for advice or assistance in personal problems. They note that the manager's working day may not really be over when they leave the office because it is quite likely that an employee or two will be waiting for them at home to discuss personal matters in private. This seems to be the case in Chinese hospitals as well.

Strategic planning

The findings of this research suggest that the hospital managers surveyed are preoccupied with routine administrative tasks and immediate operational problems. They do not seem to devote a great deal of time to strategic management and the changing needs of the wider environment.

Managing research

Managers are very interested in encouraging biomedical research at the frontiers of knowledge in their hospitals and departments. They speak much less of research which might address the problems of the health care system in China. Although many of them recognise problems within the system, such as the government funding and pricing policies and inefficient use of hospital resources, none of them spoke of research which would contribute to changing poorly constructed funding and pricing systems, for instance by documenting what is happening in their own hospital.

In this chapter I have talked about managers' practice in Chinese hospitals and how it contributes to determining the patterns of organisational performance discussed in Chapter Five. According to my research model managers' practice is shaped by management competencies and the policy environment and it is to these I turn in the next two chapters.

Chapter Seven

MANAGEMENT COMPETENCIES

Hospitals in China are facing unprecedented changes due to the current health sector reform. These include reduced government funding forcing hospitals to raise an increasing proportion of their revenue through user charges; decentralisation of hospital services making hospitals increasingly responsible for their routine operations; managerial changes designed to improve efficiency and quality of care; and increasing emphasis on competition focused on the introduction of hospital accreditation and increasing private medical practice. Adjusting to these changes is a challenge to hospital management.

There has been considerable devolution of management responsibility to the hospital level in recent years and hospitals are facing huge challenges in improving their management so that they can function efficiently in the new environment. The challenge is particularly sharp because Chinese hospitals have traditionally been managed in a strongly centralised system with relatively little autonomy. Recognising this the Ministry of Public Health launched the project 'Strengthen Hospital Management at Every Level' in 1990. This project aimed to direct the development of hospital management to address present needs (Wu, 1997).

However, while there is widespread recognition of the need for additional training to assist managers to cope with these new challenges, China is behind developed countries in this field since specialist training for hospital managers has not been part of the practice of Chinese hospitals. Furthermore, there has been little or no published research which identifies the knowledge areas and skills which are critical for improved hospital management practice in China.

The main purpose of this research is to identify priority areas for management education: this involves identifying gaps in management competencies which are barriers to better practice and better outcomes, and exploring the relative roles of 'lack

of competency' versus obstacles in the policy environment in placing limits on organisational performance.

In this chapter, following a brief review of my method (see also Chapter Three), I present a broad overview of the findings concerning managerial knowledge and skills from the responses to both the questionnaire survey and interviews. I first present the pattern of responses to the individual questions and then consider each of the main competency areas in turn. Finally, I review the broad implications of the findings and draw some conclusions about management competencies.

Method

This research used a questionnaire survey and interviews to collect data about the knowledge and skill areas which managers believe they need. In Chapter Nine I have drawn some conclusions about necessary competencies from these data collected from the managers, taking into consideration the complex and changing policy environment which also shapes the constraints and opportunities that managers are facing.

In both the questionnaire survey and interviews, the framework of hospital management competencies developed by Rawson and his colleagues was used (for details of questionnaire design see Chapter Three). This comprises eleven broad areas of competency with more specific items within each group (see Table 7.1).

The questions are structured around the broad areas and the more specific items within each broad area. In responding to particular questions (competencies they would wish to see in a replacement, competencies that they regard as lacking in their colleagues ...) respondents were asked to indicate their first six preferences in the broad groups and to indicate their first three preferences, in terms of specific items, within each of the six broad groups selected.

This approach gives a very good picture of the attitudes of managers to competency groups and specific items which were ranked high in each question. The significance of low ranking groups and items is less clear. Low ranking does not necessarily mean a rejection of those groups and items.

It is also possible that some managers have avoided competency groups which they do not fully understand. However, the lack of discrimination at the bottom end of respondents' choices makes it difficult to decide whether the results reflect respondents' judgements or their technical vocabulary.

A third limitation associated with this method is the possibility of a response bias in favour of the broad competency groups at the top of the list. Such response bias could be avoided by having a large number of differently formatted competency charts. This would have added considerably to the logistics of the research in this case and was not done. I believe that this kind of response bias would not be a major source of bias in the results reported in this chapter. The piloting of the Chinese translation of the survey questionnaire was directly observed and all pilot respondents were observed to review the full list of competency groups very carefully prior to making their selections. The emphasis on 'background competencies' and 'interpersonal competencies' reflected in the results based on the Rawson checklist corresponded closely with the respondents' opinions provided in the more open ended questions and in the interviews.

1. Background competence

Reporting writing and communicating effectively in writing
Skills and processes involved in transmitting ideas
Talking and listening to individuals and groups
Public speaking

2. Personal and inter-personal skills

Leadership ability
Staff motivation
Performance evaluation
Personnel administration
Public and media relations
Dealing with conflict and stress
Working in groups and teams

3. Financial management

Accounting principles and methods in the health services
Preparation and analysis of budgets
Analysis of financial information
Allocation and redistribution of financial resources

4. Analytical methods and information processing

Understanding and interpreting statistical data
Operational research and systems analysis
Computer applications in the health services
Evaluation methods
Research methods
Understanding and interpreting epidemiological information

5. Health policy and politics

Formulating health policy
Implementing and administering health policy
Evaluating health policy
Legal concepts and local government roles in health policy

6. Organisational management

Organisational theories applied to the health services
Organisational design and function
Organisational behaviour
Assessing organisational strengths and weaknesses
Theories of management and leadership
Unique features of health services management
Inter-organisational relationships

7. Health service planning

Planning principles and processes
Workforce planning
Information for planning
Operation and strategically planning
Environmental design
Consumer participation in planning

8. Economic factors in health services

Methods of financing health services
Theories of micro- and macro-economics
Economic analysis
Economic appraisal eg. cost-benefit

9. Health service context and structure

Structure and function of the Chinese health care system
Structure and functions of health care systems in other countries
Current issues affecting health services and administrative implications

10. Management of change and future development

Analysis of future trends
Management of social and political change
Strategies of workforce planning for change
Methods of overcoming and modifying reactions to change
Methods of introducing new technology

11. Social and cultural aspects of health

Concepts of health and illness
Health promotion and disease prevention
Ethical and moral issues in health care
Socio-economic and environmental factors in health

Table 7.1 Management competencies developed by Rawson (1986)

Responses to individual questions

Knowledge areas, skills and other factors contributing to success as a hospital manager

Survey respondents were asked to list in their own words up to three areas of knowledge and skill which have contributed most to their success as a hospital manager (Question 10). This is an open-ended question but in the analysis the responses were assigned to broad categories of managerial competence designed to correspond broadly with the Rawson framework as listed in Table 7.1. The purpose of this question was to identify those competencies respondents feel most confident about. Table 7.2 shows the eight areas and they are listed in rank order, overall and by hospitals and administrative positions[1].

	Overall (%)	Hospital (%)			Position (%)		
Knowledge areas, skills and other factors		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Managing personal relationships	58	55	60	61	54	63	52
Medical experience	44	41	42	34	39	49	31
Personal ethics	38	39	40	32	31	40	34
Management of information systems	36	30	43	29	54	30	48
Health policy	28	24	29	32	54	15	28
Financial management and health economics	25	30	28	13	35	25	19
Organisational management	23	24	23	26	8	17	43
Background competencies	23	22	15	24	15	18	44
Other	13	12	14	11	15	14	8
Non-respondents	3	8				4	2
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 7.2 The knowledge areas, skills and other factors which have contributed most to 'your success as a hospital manager'.

1. Further details from the analysis of these responses are provided in the section of 'Competencies -- overview of responses' where the more integrated discussion of individual competency commences. (Same as Table 7.3 to Table 7.10 below.)

Knowledge areas and skills of present job importance

Survey respondents were asked: "If you were to leave your job, what are the most important competencies to look for in your replacement?" (Question 18). Respondents were asked to rank at least six of the main groups of competencies in order of priority from the eleven groups provided. Table 7.3 outlines the ranking of the broad competence groups based on the first three preferences of each respondent, cross tabulated by hospitals and positions.

	Overall (%)	Hospital (%)			Position (%)		
Broad areas of knowledge and skills		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Personal and inter-personal skills	83	84	79	91	92	85	73
Background competence	75	81	69	76	53	75	76
Analytical methods and information processing	34	38	37	18	31	35	32
Financial management	26	37	20	16	15	27	30
Health policy and politics	22	14	26	28	54	19	24
Organisational management	20	17	21	23	8	16	32
Management of change and future development	14	12	16	8	15	14	10
Economic factors in health services	12	14	10	16	15	9	19
Health service context and structure	4	2	4	8	23	5	2
Health service planning	2	1	3	3	15		5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 7.3 Important knowledge areas and skills for a replacement based on inclusion in the first three preferences (Q18).

Respondents were also requested to rank three specific competencies from within each of the broad groups which they identified as particularly important in their replacement. Table 7.4 includes the first of these three specific competencies from within each group, overall and by hospital and by position.

Specific Competencies	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Personal and inter-personal skills	*83*	*84*	*79*	*91*	*92*	*85*	*73*
Leadership ability	81	77	86	72	75	81	88
Staff motivation	16	20	10	14	17	15	14
Dealing with conflict and stress	4	3	2	9	8	2	5
Background competencies	*75*	*81*	*69*	*76*	*53*	*75*	*76*
Skills and processes involved in transmitting ideas	66	66	73	55	100	75	32
Report writing and communicating effectively in writing	34	34	27	45		25	68
Analytical methods and information processing	*34*	*38*	*37*	*18*	*31*	*35*	*32*
Computer applications in the health services	91	97	86	86	75	90	84
Understanding and interpreting statistical data	9	3	13	14	25	10	15
Financial management	*26*	*37*	*20*	*16*	*15*	*27*	*30*
Preparation and analysis of budgets	62	56	61	80		63	69
Analysis of financial information	30	33	35	20	50	37	13
Allocation and redistribution of financial resources	8	9	4		50		19
Health policy and politics	*22*	*14*	*26*	*28*	*54*	*19*	*24*
Implementing and administering health policy	81	69	90	82	86	75	93
Legal concepts and regulation in the health services	19	21	10	18	14	24	7
Organisational management	*20*	*17*	*21*	*23*	*8*	*16*	*32*
Theories of management and leadership	65	50	67	100	100	56	90
Assessing organisational strengths and weaknesses	33	50	33			44	10
Management of change and future development	*14*	*12*	*16*	*8*	*15*	*14*	*10*
Management of social and political change	56	82	56	67	50	42	100
Analysis of future trends	44	18	44	33	50	58	
Economic factors in health services	*12*	*14*	*10*	*16*	*15*	*9*	*19*
Economic appraisal eg. cost-benefit	66	69	82	67	50	67	55
Theories of micro- and macro-economics	34	31	18	33	50	33	45
Health service context and structure	*4*	*2*	*4*	*8*	*23*	*5*	*2*
Structure and function of the Chinese health care system	100	100	100	100	100	100	100
Health service planning	*2*	*1*	*3*	*3*	*15*		*5*
Workforce planning	100	100	100	100	100		100
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 7.4 Important competencies in a replacement: single most important specific competencies identified within each of the top three broad areas selected by respondents (Q18).

The second part of the question reveals more about how the respondent has interpreted the broad competency group. Thus of 83% respondents who ranked *personal and interpersonal skills* among their top three broad competencies, four fifths identified *leadership skills* as the most important specific competency to be sought in a replacement within this broad area.

Managers participating in interviews were also asked the same question but they were invited to comment freely (Question 8). The areas managers identified are listed in Table 7.5; they are not categorised entirely according to Rawson's framework.

	Interview respondents	
Broad areas of knowledge and skills	**No**	**%**
Personality	15	75
Medical knowledge	13	65
Personal and inter-personal management	12	60
Management of information system	10	50
Financial management	10	50
Health policy	7	35
Organisational management	6	30
Background competencies	3	15
Other	5	25
Total number of competency mentioned	**81**	

Table 7.5 The knowledge areas and skills of present job importance mentioned by interviewees (Q8).

The most serious deficiencies of knowledge areas and skills among managers in their own hospitals

Survey respondents were asked to rank in order at least six knowledge areas and skills from the list of eleven broad groups provided, corresponding to the most serious deficiencies among managers at their hospital (Question 19). Table 7.6 indicates the nine areas identified by respondents based upon inclusion in the first three broad areas selected, overall and by hospital and position.

Broad areas of knowledge and skill	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Personal and inter-personal skills	73	78	68	76	77	72	74
Analytical methods and information processing	51	49	51	52	62	58	30
Background competence	45	55	41	25		36	75
Financial management	35	36	35	28	54	37	24
Organisational management	26	24	25	33	31	24	39
Management of change and future development	24	16	29	21	39	26	17
Economic factors in health services	23	24	21	31	23	27	14
Health policy and politics	21	8	26	32	39	14	27
Health service planning	2	1	3				7
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 7.6 The most serious deficiencies with respect to management knowledge areas and skills 'among managers at your hospital', broad groups, based upon inclusion in the first three preferences, overall and by hospitals, positions (Q19).

Respondents were also asked to rank three specific deficiencies from within those broad groups which they see as particularly lacking among hospital managers. Table 7.7 illustrates the first of these three specific competencies ranked by the respondents, overall and by hospital and position.

Of 73% respondents who included the broad category of *personal and inter-personal skills* among the top three areas of deficiency in management, over two thirds indicated that skills in *leadership abilities* was their main concern.

Specific Competencies	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Personal and inter-personal skills	*73*	*78*	*68*	*76*	*77*	*72*	*74*
Leadership abilities	69	69	71	55	70	70	70
Dealing with conflict and stress	19	21	17	17	10	17	19
Staff motivation	8	6	8	14	20	12	2
Personal administration	4	3	4	7			12
Analytical methods and information processing	*51*	*49*	*51*	*52*	*62*	*58*	*30*
Computer applications in the health services	90	93	85	80	50	97	82
Evaluation methods	10	7	15	20	50	3	18
Background competence	*45*	*55*	*41*	*25*		*36*	*75*
Skills and processes involved in transmitting ideas	87	88	93	70		88	88
Report writing and communicating effectively in writing	13	12	7	30		12	12
Financial management	*35*	*36*	*35*	*28*	*54*	*37*	*24*
Analysis of financial information	68	70	65	91	100	69	43
Preparation and analysis of budget	32	30	35	9		29	57
Organisational management	*26*	*24*	*25*	*33*	*31*	*24*	*39*
Organisational theories applied to the health services	84	91	79	79	75	88	74
Organisational behaviour	16	9	21	21	25	12	26
Management of change and future development	*24*	*16*	*29*	*21*	*39*	*26*	*17*
Analysis of future trends	71	40	76	100	60	76	80
Methods of overcoming and modifying reactions to change	17	30	15		40	7	20
Methods of introducing new technology	12	30	7			16	
Economic factors in health services	*23*	*24*	*21*	*31*	*23*	*27*	*14*
Economic appraisal eg. cost-benefit	62	73	63	33	100	61	38
Economic analysis	38	18	37	67		39	62
Health policy and politics	*21*	*8*	*26*	*32*	*39*	*14*	*27*
Implementing and administering health policy	76	86	89	67	60	81	81
Legal concepts and regulation in the health services	24	14	11	33	40	19	19
Health service planning	*2*	*1*	*3*				*7*
Planning principles and processes	100	100	100				100
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**38**

Table 7.7 The most serious deficiencies with respect to management knowledge and skills 'among managers at your hospital': principal specific competencies selected from within the broad competency groups (frequency of mention of specific competencies identified by each respondent within their selected most serious broad group) and cross tabulated by hospitals and positions (Q19)

Areas of formal management training for successful performance

Respondents were asked to suggest the broad areas of management for which formal training would be particularly important (indicate the areas by listing, in priority order, at least six from the 11 main groups of competencies listed above. Question 20). Table 7.8 outlines the relative importance of the knowledge areas and skills which formal training would prepare people for successful performance in jobs based upon inclusion in the first three preferences, overall and by hospitals and administrative positions.

	Overall (%)	Hospital (%)			Position (%)		
Broad areas of knowledge and skill		**First**	**Second**	**Third**	**PM**	**DM**	**GA**
Personal and inter-personal skills	80	86	76	79	77	80	81
Financial management	64	74	58	61	46	73	48
Analytical methods and information processing	42	51	33	42	23	40	57
Background competence	36	35	34	42	31	37	35
Organisational management	23	14	33	16	39	25	12
Management of change and future development	22	12	26	34	23	20	28
Economic factors in health services	17	12	22	13	38	12	27
Health policy and politics	13	14	13	11	15	13	15
Health service planning	3	2	2	8		2	9
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 7.8 The broad areas of management for which formal training would be particularly important to prepare people for successful performance in 'a job such as your own' based upon inclusion in the first three preferences, overall and by hospitals, positions (Q20).

Survey respondents were also asked to indicate three specific competencies from within each of the broad groups which they identified as particularly important for formal management training. The items are outlined in rank order in Table 7.9 and they include the first specific competencies from within each group of the top three preferences, overall and by hospital and position.

Specific Competencies	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Personal and inter-personal skills	*80*	*86*	*76*	*79*	*77*	*80*	*81*
Leadership abilities	85	91	81	77	80	83	89
Dealing with conflicts and stress	11	9	12	13	20	12	11
Staff motivation	4		6	10		4	
Financial management	*64*	*74*	*58*	*61*	*46*	*73*	*48*
Analysis of financial information	50	45	56	57	50	50	*46*
Preparation and analysis of budgets	30	37	24	30	17	29	*32*
Allocation and redistribution of financial resources	20	16	18	13	33	19	*21*
Analytical methods and information processing	*42*	*51*	*33*	*42*	*23*	*40*	*57*
Computer application in the health services	72	78	65	81	67	65	*73*
Understanding and interpreting statistical data	28	22	35	19	33	35	*26*
Background competence	*36*	*35*	*34*	*42*	*31*	*37*	*35*
Skills and processes involved in transmitting ideas	94	94	95	87	100	97	85
Report writing and communicating effectively in writing	6	6	5	13		3	15
Organisational management	*23*	*14*	*33*	*16*	*39*	*25*	*12*
Theories of management and leadership	82	69	89	67	60	93	43
Organisational theories applied to the health services	18	31	11	33	40	7	57
Management of change and future development	*22*	*12*	*26*	*34*	*23*	*20*	*28*
Analysis of future trends	74	64	83	85	33	85	69
Strategies of workforce planning for change	26	36	17	15	67	15	31
Economic factors in health services	*17*	*12*	*22*	*13*	*38*	*12*	*27*
Methods of financing health services	46	33	56	60	60	50	63
Economic appraisal eg. cost-benefit	54	67	44	40	40	50	37
Health policy and politics	*13*	*14*	*13*	*11*	*15*	*13*	*15*
Implementing and administering health policy	100	100	100	100	100	100	100
Health service planning	*3*	*2*	*2*	*8*		*2*	*9*
Planning principles and processes	100	100	100	100		100	100
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**38**

Table 7.9 The specific competencies with respect to formal training 'particularly important to prepare people for successful performance in a job such as your own': principal specific competencies identified within each of the top three broad areas selected by respondents and cross tabulated by hospitals and positions (Q20).

Of the 80% respondents who ranked *personal and inter-personal skills* among their top three broad competencies, 85% identified *leadership abilities* as the most important specific competency for formal training within the broad area of *personal and inter-personal skills.*

Interviewees were also asked to comment freely about the major management areas where there is most need for management training in their hospitals (Question 12). They are presented on Table 7.10 but they are not categorised entirely according to Rawson's framework.

	Interview respondents	
Broad areas of knowledge and skills	**No**	**%**
Basic theory of management	12	60
Management of patient care and quality control	10	50
Financial management	9	45
Management of information system	8	40
Hospital organisational management	8	40
Personal and inter-personal relationships	7	35
Health policy	6	30
Managerial psychology	4	20
Health law and ethics	3	15
Management of teaching and research	2	10
Total number	**69**	

Table 7.10 The knowledge areas and skills most needed in formal management training (Q12).

Lack of skills and knowledge as a source of frustration and difficulty

Survey respondents were asked to list up to three of their greatest frustrations and problem areas in their present position (Question 17). There were a total of 715 responses to this question which were coded under the code headings of

'performance', 'practice', 'competency' and 'environment'[2]. A total of 71 comments (coming from 29% of the total 242 respondents) were coded as 'competency'.

In the interviews, in response to the question "what are some of the difficult issues facing you personally with respect to the management responsibilities of your job?" (Question 3), there were 73 comments which were coded under all of the main headings of the coding framework (performance, practice, competency and environment). Fifty five percent of the managers (11 interviewees) perceived lack of managerial expertise as one of the most significant difficulties in their job.

Reform needed for management competency

Survey respondents were invited to nominate the single most important management reform that they would like to see in their hospital which would contribute to improved patient care and improved efficiency (Question 15). There were 533 responses to this question which were categorised under the coding headings of 'practice', 'competency' and 'environment'. A total of 22 responses (9% of the total 242 respondents) were coded as 'competency'.

Interviewees were also asked to nominate the single most important management reform that they would like to see in their hospital which would contribute to improved patient care and improved efficiency. There were 61 comments which were coded under the coding headings of 'practice', 'competency' and 'environment. Thirty percent of the interviewees (6 managers) mentioned access to management training (coded under the heading of 'competency').

Training strategies

Managers participating in interviews were asked to comment on the types and approaches of management training program which would be most suitable for their situation. Forty percent of the interviewees argued that management training programs should be designed to meet the needs of the hospital, whatever these might be.

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2. See Chapter Four for a more detailed analysis of the 'hospital performance' codes, Chapter Five for the 'practice' codes and Chapter Seven for the 'environment' codes.

In speaking about training approaches, 85% of the managers (17 interviewees) suggested that in-service training would be more practical in the health care field. However, 15% of the managers (3 interviewees) indicated that off-service training would give managers more time and they expected to have access to such training opportunities.

Competencies - overview of responses

Personal and inter-personal skills

Hospital managers considered skills in *managing personal relationships* to be of greatest importance to their personal effectiveness as managers. In response to the question about the knowledge areas and skills which contributed to their success, 58% of survey respondents commented on it, especially the departmental managers (63%. See Table 7.2).

The kinds of responses to Question 10 (knowledge areas and skills contributing most to the success of hospital managers) which were coded as *skills in managing personal relationships* are exemplified by:

> *How to deal with inter-personal relationships is the key issue of management;*
>
> *Setting strong rules of reward and penalty, and introducing work incentives for staff;*
>
> *Coordinating the department's inter-personal relationships and inter-department relations;*
>
> *Having good relationships with superiors and subordinates in order to coordinate different relations and solve conflict.*

When asked about knowledge and skills to be looked for in a replacement *personal and inter-personal skills* were rated as the most important of the broad groups of competencies (83%, see Table 7.3). It was rated first by a large proportion of survey respondents across the three hospitals and across the different managerial levels.

When given the opportunity to indicate what they saw as the key elements of personal and inter-personal skills needed in a replacement, managers focused on *leadership abilities* (Table 7.4). Around 80% of those who included personal and inter-personal skills in the top three of the broad groups of competencies pointed to leadership as the key element they were looking for. A smaller proportion of those who selected personal and inter-personal skills indicated that *motivational ability* was the key element they were looking for (16%)

About 10% of those from the Third Affiliated Hospital who had selected personal and inter-personal skills indicated that an *ability to handle conflict and stress* was the principal specific competency they had in mind.

Sixty percent of the 20 interviewees also mentioned *personal and interpersonal skills* as important competencies in their present job. Managers indicated that interpersonal management is one of the most important aspects of management and a hospital or a department cannot develop unless it has a strong internal unity. This depends upon proper use of personnel, good interpersonal relationships, and harmony between the leadership and staff.

> *An ability to maintain harmonious relationships with all the people above and below is necessary so that he/she can coordinate different relations and dissolve conflicts. (Party secretary)*

> *We should be able to know how to work with people and be able to develop our staff's potential by establishing individual work incentives. (departmental head)*

A large proportion of survey respondents also saw *personal and inter-personal skills* as the area of the most serious deficiencies among hospital managers (73%, see Table 7.6). Almost 70% of those who identified personal and inter-personal skills as an area of deficiency among the hospital managers indicated that they had *leadership ability* in mind (see Table 7.7).

Again, in commenting on priority for training, the need for upgrading *personal and inter-personal skills* was given the most emphasis by managers in different hospitals and in administrative positions (80% of respondents rated it among their top three broad areas. See Table 7.8). Eighty five percent of these managers indicated that

they had *leadership ability* uppermost in their mind in selecting personal and inter-personal skills (see Table 7.9).

The need for management training in the area of *personal and inter-personal skills* was given some emphasis by interviewees, but it was ranked lower as compared to the response from the questionnaire survey (mentioned by 35% of the 20 interviewees, see Table 7.10).

This research clearly identifies that hospital managers regard the management of people as a key aspect of their job and overwhelmingly see the management of people in terms of leadership ability.

Background competence

In commenting on the knowledge areas and skills contributing to their own personal success, 23% of managers identified areas coded broadly as *background competence* (see Table 7.2), although the responses were significantly higher in the general administrative stream (44%, nearly double the overall response).

The kind of responses to the question about knowledge areas and skills contributing most to the success of hospital managers which were coded as *background competencies* are exemplified by:

> *As a successful hospital manager, one of the most important aspects is having good skills in exchanging and sharing ideas with others;*
>
> *Possessing better skills in transmitting ideas;*
>
> *Talking and listening to people's criticisms with an open mind;*
>
> *Abilities in writing and communicating is a basic factor for manager's success.*

However, when asked, using the list of Rawson competencies, about knowledge and skills to be looked for in a replacement, 75% of survey respondents selected, among their top three broad groups, the group described as *background competence* (see Table 7.3). It was of particular importance for managers from the First Affiliated Hospital (81%), but was given a relatively low rating by the respondents from the Second Affiliated Hospital (69%) and the presidential respondents (53%).

In selecting background competence the two specific areas managers were most concerned about were *skills and processes involved in transmitting ideas* (66%) and *report writing and communicating effectively in writing* (34%). General administrators were particularly concerned about this skill area (see Table 7.4).

Only 15% of managers interviewed mentioned *background competencies* as important for a person replacing them (see Table 7.5). A few presidential respondents stated that reading official reports and memoranda was an important aspect of their job and they paid very close attention to the material circulated to them. They regarded this type of reading as a basic duty that had to be performed effectively.

Forty five percent of survey respondents included *background competence* among the three most serious areas of deficiency among hospital managers, particularly among the managers in the First Affiliated Hospital (55%) and the general administrators (75%), but no presidential respondents (see Table 7.6)

Among those who included the broad category background competence among the top three areas of deficiency in managers at their hospital, almost 87% indicated that *skills in transmitting ideas* was their principal concern (see Table 7.7). Around 12% selected *report writing* as their principal concern in this broad area.

Overall 36% of respondents identified background competence as one of the particularly important areas for formal management training (see Table 7.8), almost all of whom indicated that the specific *skills and processes involved in transmitting ideas* was their main priority here (see Table 7.9). However, none of the managers participating in the interviews identified competencies within this broad group in discussing priorities for management training.

It stands out quite clearly that hospital managers saw background competence as one of the key areas for their present jobs, and their focus of concern is on the skills and processes involved in transmitting ideas.

Analytical methods and information processing

Management of information systems was an area frequently cited by survey respondents (36% overall) as an important management competency contributing to their success (see Table 7.2). It was mentioned more commonly by the managers from

the Second Affiliated Hospital (43%), and by presidential respondents and general administrators (54% and 48% respectively).

The kinds of responses to the question about the knowledge areas and skills contributing most to the success of hospital managers which were coded as *management of information systems* are exemplified by:

> *Mastering some modern management skills, computer applications in particular;*
>
> *Paying attention to collecting information, including information in relation to advanced medical technology and hospital management;*
>
> *Computer application is becoming prevalent and it is a good tool for management, so it's important for me to use computer to enhance work efficiency;*
>
> *Ability to collect and analysis information especially in advanced technology and method.*

Around one third of the survey respondents (34%) selected the broad area of *analytical methods and information processing* among the three most important areas for their job replacement (see Table 7.3). Managers from the Third Affiliated Hospital were less convinced of the importance of this area (18%). Respondents selecting this group indicated overwhelmingly that their focus of concern was *computer applications in health service* (see Table 7.4).

Fifty percent of managers interviewed considered that *skills in the management of information systems* would be important for anyone replacing them in their job (see Table 7.5). Many managers suggested that as a hospital top level manager, he/she needs to look at statistical reports every day to understand finance, medication and the situation of wards in the hospital. Especially the presidential leaders need to know the whole situation of the hospital, so they can focus on the departments with particular problems.

Several managers commented that as the largest hospitals of Yunnan Province, these hospitals need to have high-level administrators who possessed modern

managerial skills including the use of computers and keeping in touch with management thinking at the national and international level:

> *I myself have taken part in a computer training program and benefited a lot from it. When I returned, I applied what I had learned in the Department of Medicine and encouraged this practice for others. As a result, we have greatly increased our efficiency. (vice president)*

This broad area was the second most commonly selected in responding to the question about deficiencies in management competencies at their own hospital (see Table 7.6). It was given relatively high emphasis by the presidential and departmental managers (62% and 58% respectively) as compared to the general administrators (30%). As before the focus of these respondents was overwhelmingly on *computer applications in health services* (90% of those selecting this item within the broad areas analytical methods and information processing, see Table 7.7).

In speaking about the areas of management for which formal training would be particularly important to prepare people for successful performance in 'a job such as your own', 42% included *analytical methods and information processing* among the top three broad areas selected (see Table 7.8). This was included more commonly by managers from the First Affiliated Hospital (51%) and the general administrative (57%) stream, but a less commonly by the presidential leaders (23%).

In their selection of specific competencies within this group respondents gave priority to *computer applications in health services* in 72% and *interpreting statistical data* in 28% (see Table 7.9). Forty percent of the 20 interviewees also considered *management of information systems* among the knowledge areas and skills most needed in formal management training (see Table 7.10). Hospital managers regarded the analytical methods and information processing as an important aspect of their job and overwhelmingly identified the management of information systems in terms of computer application.

Financial management

One quarter of respondents identified *financial management* skills among the factors which led to their own success as managers (see Table 7.2), although this was

stated less frequently by the managers of the Third Affiliated Hospital (13%). This might be related to the fact that the Third Affiliated Hospital had not implemented the Contract Managerial Responsibility System at the time of this study.

The kinds of response to the question (in the survey) about knowledge areas and skills contributing to managers' success which were coded as *financial management and health economics* are exemplified by:

> *Under the economic reforms, there is a need for strong financial management (to balance cost and profit) so as to manage the hospital efficiently;*
>
> *Using macro- and micro-economic theory to analyse and evaluate hospital and department finance, and making effective use of resources;*
>
> *Possessing financial management ability and analysing budgets effectively;*
>
> *Ability in financial management, especially in analysis of financial information.*

The important knowledge areas and skills needed in a replacement are presented in Table 7.3. The broad area of *financial management* was included in the top three broad areas by only 26% of all respondents. This was higher among managers from the First Affiliated Hospital (37%) and general administrators (30%). Managers in the First Affiliated Hospital are taking more responsibility in generating revenue because of the implementation of the Contract Managerial Responsibility System, and about 10% of the respondents within the group of general administrators were financial managers, who performed a considerable amount of financial management in their major job. Only two out of 13 of the presidential respondents selected this area among their top three.

Table 7.4 shows that in selecting financial management as an important broad area competency for a replacement for their jobs, most respondents (62% of the 26%) regarded the *preparation and analysis of budgets* as the most important specific competency within this group.

Half of the interviewees mentioned the area of *financial management* among the most important competencies for their job replacement (see Table 7.5). Managers recognised that hospital management is provided with new opportunities under health system reform. Under the market economy, a hospital is further encouraged to generate revenue additional to that provided by the government. This has led to a new demand for financial management expertise in the hospital.

Some managers considered that there are relevant rules and regulations in financial management which are important to the job of the managers, and if managers are not aware of them, the department or hospital may lose money.

> *If the hospital keeps losing money, we had better close down to avoid further problems for the state. It will be very helpful for our managerial work when we possess general knowledge and skills about hospital finances. (vice president)*

> *I try to control the expenditure of the hospital and have made bold financial proposals to the presidential leadership as part of my contribution to the hospital's development. Many of my proposals have been accepted by the leadership. (general administrator)*

It is noteworthy that while only 26% of respondents identified the broad area of *financial management* as a priority for a replacement, 35% cited *financial management* among the most important deficiencies among managers at their hospital (see Table 7.6). It was included more commonly by the presidential managers (54%). Most respondents indicated that their key concern was the *analysis of financial information* (see Table 7.7).

It is even more striking that, when asked about priorities for training, 64% of respondents identified *financial management* within the top three broad areas (see Table 7.8). This was particularly so among managers from the First Affiliated Hospital (74%) and the departmental managers (73%). Again, respondents indicated that their chief concern here was the *analysis of financial information* (see Table 7.9).

Nine interviewees (45%) commented on the area of *financial management* by listing the major management areas where there is most pressing need for management training in their hospitals (see Table 7.10).

The findings of this study suggest that hospital managers have an interest in and would like to develop an ability in financial management as the consequence of the implementation of the CMRS in hospital. They generally see this competency area in terms of analysis of financial statements and preparing of budgets.

Health policy and politics

In speaking about the knowledge areas and skills contributing most to their own success as hospital managers, the area of *health policy* was not cited frequently overall (28%), although a large proportion of presidential leaders (54%) defined it as an important element for their success.

The kinds of response to the question of knowledge areas and skills contributing to managers' success which were coded as *health policy* are exemplified by:

> *Learning and understanding Party and state policies and guiding principles;*
>
> *Firmly implementing Party and state policies, especially the policies of health system reform;*
>
> *Managing the hospital in accordance with Party and state policy guidelines;*
>
> *Learning and understanding state health policies and guiding all staff to implement them.*

Only 22% of respondents listed the area of *health policy and politics* among the top three knowledge areas and skills for a replacement taking over their job (see Table 7.3). It was included more frequently by the presidential group (54%). Respondents indicated that in rating this area highly their main focus of concern was the *implementing and administering of health policy* (see Table 7.4).

This area was mentioned by 35% of the 20 interviewees including five presidential managers. The managers considered that a comprehensive manager needs to have a good understanding of health policy. Specifically, as a presidential leader, they need to have good knowledge about the Party and state policies and a strong commitment to the implementation of these policies.

Although the area of *health policy and politics* was not rated highly by respondents overall among the three most serious deficiencies among managers in their own hospital (21%, see Table 7.6), it was given a relatively high rating by managers in the Third Affiliated Hospital (32%) and by the presidential managers (39%).

Thirteen percent of respondents included this area among the three key areas of training for people in positions and as their own (see Table 7.8). All of those respondents indicated that their concern was with *implementing and administering health policy* (see Table 7.9).

Thirty percent of the managers interviewed identified *health policy* as an area needing more attention in formal management training (see Table 7.10).

The results of this study indicated that hospital managers regarded health policy and politics as one of the key aspects of their job and overwhelmingly understand this in terms of implementing and administering health policy.

Organisational management

Issues within this broad area were mentioned by 23% of respondents (see Table 7.2) in accounting for their own success as managers. It appears that *organisational management* is not a major issue for the top managers. Only one presidential administrator (1/13) cited this area although 43% of the general administrators highlighted organisational management issues as contributing to their success.

The kinds of responses to the question of knowledge areas and skills contributing to managers' success which were coded as *organisational management* are exemplified by:

> *Learning and understanding organisational theory and applying it into hospital management;*
>
> *Having basic knowledge and skills in hospital structure and function;*
>
> *The correct assessment of the hospital or department strengths and weaknesses.*

Twenty percent of survey respondents rated the area of *organisational management* among the top three important competencies for their job replacement

(see Table 7.3). It received a higher rating by the general administrators than the presidential managers (32% and eight percent respectively). Respondents indicated that in selecting this broad area their chief concern was with *theories of management and leadership* (65%) particularly among the general administrators (see Table 7.4).

Thirty percent of interviewees also mentioned *organisational management* as important competencies to be sought in people replacing them in their jobs (see Table 7.5). Some general administrators emphasised the need to understand the hospital's organisational structure, such as the functions and duties in different levels of the hospital in order to manage it well.

Organisational management was included in the top three serious deficiencies in management competencies in 'your hospital' by 26% of respondents (see Table 7.6). Their principal focus of concern here was with *organisational theories applied to the health services* (see Table 7.7).

Twenty three percent of respondents identified the need for formal training in *organisational management* among their top three priorities for training, considerably higher among managers from the Second Affiliated Hospital (33%, see Table 7.8). Of the 23% of survey respondents, who included training in organisational management in the top three priorities, almost all were primarily concerned with *theories of management and leadership* (see Table 7.9).

Forty percent of interviewees identified *organisational management* as a priority for formal training (see Table 7.10).

Management of change and future development

Only 14% of respondents included the *management of change and future development* among the top three broad areas of competencies to be sought in a replacement (see Table 7.3). Respondents were concerned with both the *management of social and political change* and *analysis of future trends* (see Table 7.4).

About one quarter of survey respondents rated the area of *management of change and future development* among the three most serious deficiencies among managers at their hospital, particularly among managers at the Second Affiliated

Hospital (29%, see Table 7.6). Respondents indicated that their chief concern in this area was the *analysis of future trends* (see Table 7.7).

Over 20% of respondents included this area as one of the top three for which formal management training would be particularly important to prepare people for successful performance in a job, such as their own (see Table 7.8). It was given a high rating by the managers in the Third Affiliated Hospital (34%). Again, respondents indicated that the *analysis of future trends* was their chief concern (see Table 7.9).

This area was not mentioned by managers either in the questionnaire survey or the interviews when they were asked to comment freely about important management competencies.

Economic factors in health services

Economic factors in health services was rated by 12% of respondents among the top three as the knowledge area and skills which would be important in a person replacing them in their job (see Table 7.3). It was ranked more highly by the general administrators (19%) than departmental managers (nine percent). Respondents selecting this broad area indicated that their main concern was with *economic appraisal* and, less often with *theories of micro- and macro-economics* (see Table 7.8).

Twenty three percent of respondents regarded this area as one of the three most serious deficiencies which respect to management knowledge areas and skills among managers at their hospital (see Table 7.6). Of the 23% of people who mentioned *economic factors in health services*, most were concerned with *economic appraisal* and less often with *economic analysis* (see Table 7.7).

Seventeen percent of respondents included *economic factors in health services* among the top three areas for which formal management training would be of particular importance for people doing their job (see Table 7.8). Relatively few departmental managers (12%) included this area. Respondents who included this area were concerned about both *methods of financing health services* and *economic appraisal* (see Table 7.9).

This area was not mentioned by managers either in the questionnaire survey or the interviews when they were asked to make free comments about important management competencies.

Health service context and structure

Very few respondents included this broad competency area as important for potential replacements in their job (see Table 7.3), and all of those who did indicated that their concern was with *structure and function of the Chinese health care system* (see Table 7.4).

This area was not included in the first three preferences in response to the questions which asked about deficiencies in respect to management competencies and about the major areas of management being most in need for formal training.

This area was also not mentioned by managers either in the questionnaire survey or the interviews when they were asked to make free comments about important management competencies.

Health service planning

Very few respondents included *health service planning* in the three top competencies for potential replacements (less than 2%); none of the departmental managers included it (see Table 7.3). Of six specific competencies in this broad area the item *workforce planning* was of principal concern to those who included this broad area (see Table 7.4).

This area was also given a low rating by respondents (based upon the top three preferences) as the most serious lack of management knowledge area and skill among managers (see Table 7.6) and also as the area of management for which formal training is important for the job of managers (see Table 7.8).

This area was not mentioned by managers either in the questionnaire survey or the interviews when they were asked to make free comments about important management competencies.

Social and culture aspects of health

The category of *social and cultural aspects of health* was not rated by the hospital managers in the top three broad areas in responding to any of the questions under discussion. This area was also not mentioned by managers either in the questionnaire survey or the interviews when they were asked to make free comments about the management competencies.

Medical experience

Managers were invited to make free comments on knowledge areas and skills which had contributed to their own success as managers and the second most common group of responses pointed to the importance of having experience in medicine (see Table 7.2). Over 40% of respondents, departmental managers in particular, argued that medical management, unlike other types of management, has a high need for professional knowledge. Many managers considered that a hospital manager's managerial competence and medical qualifications are of great importance to maintaining and enhancing the quality of care in a hospital.

The kinds of responses to the question of knowledge areas and skills contributing to managers' success which were coded as *medical knowledge* are exemplified by:

> *Possessing a medical degree is a basic condition for managers' selection in the hospital system;*
>
> *A need for managers to have a medical background and possess higher professional knowledge in clinical medicine. It would be very helpful in the improvement of quality of care;*
>
> *Being able to make valuable contributions in managing people and quality of care because of my medical expertise and authority;*
>
> *Knowing the whole process of clinical work makes me be able to use medical resources effectively and efficiently.*

Of the 20 interviewees, 65% mentioned medical experience as an important aspect to be sought in a potential replacement (see Table 7.5). Many managers argued that to manage a hospital or a department effectively and efficiently, they need to know

about the whole process of medical care. Several presidential respondents indicated that presidential leaders of a larger teaching hospital need to have at least a tertiary medical diploma or professional title of associate directive doctor behind them.

> *They should be medical experts (with the exception of supply service managers) with special managerial knowledge. Only thus can they promote the development of hospital management and qualify the hospital as truly a university hospital. (vice president)*

> *Without professional knowledge of a certain level, it is impossible for them to hold convincing authority over a large hospital packed with capable medical professionals of the province. (vice president)*

A few presidential respondents said that as a top level manager, he/she needs to possess certain medical knowledge about the whole medical treatment process but does not have to be an expert in everything.

This area was emphasised by most departmental managers. According to their opinions, a manager, especially a department head (but not necessarily a hospital president) needs to be strong in his medical speciality. He/she needs to be one of the leading professionals in his/her own department.

> *The managerial work at the departmental level includes professional and administrative aspects. It is important to possess strong professional and managerial competency as a departmental manager to set an example for medical staff. (departmental head)*

> *Good medical skills can be very convincing and inspiring to others and can stimulate employees' enthusiasm for professional improvement. If a department has no professional advancement, then the staff will lose confidence. A manager with good medical knowledge would fully exploit the human and financial resources as well. (departmental head)*

> *A manager has to have some professional capability so that he/she can be truly convincing in his authority. The hospital is a highly professional place, and one cannot hope to manage a department well without some high level of professional ability himself. (departmental head)*

Personal ethics

In their free text response to the question about competencies which had contributed to their own success 38% of respondents mentioned different aspects of personality (the third most common group, see Table 7.2). The kinds of responses which were coded as *personality* are exemplified by:

Devotion in a manager is important, since we are to serve the whole hospital staff;

Making strict demands on myself and being selfless, setting an example for my subordinates;

Having a strong sense of responsibility and positive attitudes toward management work;

Having moral integrity, being fair-minded and trusting and supporting others.

Among the interviewees personal ethics ranked first among attributes to be sought in a potential replacement (see Table 7.5). The managers identified the characteristics of the personality for a good manager as:

to be upright and just, authoritative and trustful;

to be ethical and devoted (to serve the whole hospital staff);

to have a strong sense of responsibility, flexibility and creativity at work;

to be fair and provide reasonable treatment to all; and

to have innovative ideas and desire to be successful at his/her managerial position.

A hospital chairman commented that an administrator's words and behaviour can be very influential. That is why he/she needs to be willing to serve the majority of people and be a good role model, otherwise the negative effects can be detrimental.

A vice president emphasised that a manager should love his/her administrative work and have deep commitment. He argued that some people have the wrong idea that administrators are all opportunists aiming at high official positions. In fact, he stated, a manager has to sacrifice a great deal:

I used to be invited to do lots of operations and published a lot of articles in leading national journals. All these were beneficial to my social reputation and economic gain. Since my promotion to the position of vice president, I have done fewer operations and had literally no time for my own medical research. (vice president)

Another vice president said that a good personality and a wholehearted devotion for public welfare are important characteristics in a good manager. He argued that a leader needs to set an example for others to follow:

He/she needs to be a person of principle and not afraid to lose his position for principle-abiding. (Party secretary)

Other areas

In response to the question of knowledge areas and skills which have contributed most to the success of hospital managers, survey respondents also made comments on some other areas such as the management of quality of care, managerial psychology, health law and medical ethics.

Managers interviewed also mentioned other areas including patient care and quality control, health law and managerial psychology as the management competencies of importance in their jobs. There was a strong and consistent agreement within the nursing group that managerial psychology was an important aspect in their practical work. The reason is aptly summed up by a head nurse, who emphasised "it is especially needed in our dealings with doctors, nurses, and patients and can stimulate incentives and bring about better efficiency."

Basic theories of management and the management of patient care and quality control were identified by 60% and 59% of the interviewees respectively as knowledge areas for which formal training would be particularly important for managers' jobs (see Table 7.10). Other areas also mentioned by a few managers included managerial psychology, health law and ethics, and management of teaching and research.

Four interviewees (20% of the 20 interviewees) pointed out that their lack of managerial knowledge made it difficult to answer questions about management areas

for where there is need for management training. It seems not so surprising since there are no managers available with formal management training:

> *As for the content of management training, I don't know how to answer. I have no managerial knowledge and know nothing about its content. As a matter of fact, we don't even know the specific management terms. (departmental head)*

> *I have no idea as to the content of management, as I possess no knowledge in it. I don't know what to say as I lack managerial knowledge. I have no systematic view about this area. I believe I will have more to say after training. (general administrator)*

Need for training

In the survey and the interviews, respondents were asked about frustrations and difficulties in their present positions. Many of the responses were coded under the heading of 'organisational performance', 'practice' and 'environment'. A total of 71 comments (29% of total) were coded as 'competency'.

Lack of management expertise

The inadequacy of management expertise for hospital managers was mentioned by 29% of respondents. Most managers indicated that many hospitals' managerial cadres do not possess high enough management competence and this becomes a barrier to the development of management at all levels of their hospitals. This is a common problem facing all the managers in their hospitals.

> *With insufficient managerial expertise people can muddle through daily common tasks, but it does not enable them to manage the hospital efficiently. A manager is quite different from a doctor, who has only his/her own patient beds to attend to. Instead, a manager has to supervise his/her hospital or department and then medical and nursing staff, which is quite a challenge to them. (vice president)*

> *It is easier to be a doctor than to be a manager, especially a president. I became vice-president in 1987 (the then youngest vice-president in the province)*

to be in charge of patient care, teaching, research, nursing, and supplies. A lack of management expertise does not seem to qualify for such a high level of management. I feel I am still facing problems in lacking managerial expertise and need to study advanced managerial knowledge and skills more systematically. (president)

Though we talk a lot about scientific, systematised management, in fact our management is very crude and cannot even be termed as experiential management, since we lack experience in management. If our hospital adopts good strategies and enhances in management, then our revenue could be increased several times over. The lack of management expertise is a big problem from the top level to the bottom level (ie. from the college level to the hospital level). I dare say many department heads don't know what they should do about their management. (Party secretary)

We all know the importance of management when we encounter difficulties at work, but we have no definite ideas about how to manage, that is, how to use managerial theories to guide our practical work. When we use our experiences to solve problems, we sometimes find it very difficult (let alone the fact that these experiences may not have been right). Hospitals seriously lack capable managerial staff. (departmental head)

There is disharmony between the clinical, paramedical departments and the administration sections. Management on the whole is problematic. In general this problem is related to the administrative system, but it is also closely linked to administrative staff's management competency, particularly at the upper hospital leadership level. Lack of management expertise among the hospital management staff exists in our hospital. We are lacking even the basic managerial knowledge. (departmental head)

At the present time, the hospital lacks managerial personnel rather than professional staff, which affects hospital efficiency and development more seriously. The whole administration is not adequate enough to supervise well the relevant work in the hospital. The management competency of all levels of

administrators in the hospital needs further improvement. (general administrator)

I feel very poor in managerial knowledge. As a medical professional, I have never received any managerial training. Now that I have been promoted to be a administrator, I simply follow what others do without any scientific theory as guide. I do not quite understand why I do what I do. I have no clear idea about management and lack managerial knowledge and skills. (general administrator)

Aspiration for management training

Most of the managers expressed an urgent desire to learn management knowledge and skills. They stated that management is a brand new discipline for hospital managers and they do hope to participate in systematic management training so as to master scientific managerial theories and approaches instead of relying entirely on their experience to guide the hospital managerial work:

When you enter the president's office, you do not automatically become a qualified president. The leaders have to be equipped with good managerial expertise. Otherwise, we will fail to promote the hospital's development due to our inadequacy. (vice president)

I earnestly desire to receive regular managerial training. I really don't know how to manage a hospital without proper training. Presently our hospital management is quite blind. If equipped with good managerial knowledge and skills, I'm sure I'd have a more clarified vision. Management is something that the leaders in KMC and all over Yunnan should learn. (vice president)

Though our department is not big, still there are all sorts of things to do. We need to make proper use of major task is to promote the department's development in the right direction. This in specific requires comprehensive managerial competency on the manager's part. Presently it seems not too difficult to manage a department well by experiential knowledge, but managing a hospital certainly demands much more than that. (departmental head)

As a young managerial worker without much experience, I find it difficult to give directions to employees or to coordinate our relationship with other departments. I really hope to have some opportunity to receive management training. We can only improve our work efficiency after we have really studied how to guide our practice. (departmental head)

We have to be good medical professionals as well as good managers. If you know little about medicine, your employees will not listen to you. If you know little about management, the hospital is at stake. We ought to quantify our management goals to make a just and reasonable assessment, instead of relying on personal wills and interests. If our administrative staff of all levels have good, high-level managerial ability and use scientific managerial approaches to run the hospital, then we can expect a better development for the hospital as well as individuals. I really hope to renew my managerial expertise. (departmental head)

Managers participating in interviews (those who are participating in JVHMTP) said that they felt delighted about the news of KMC planning to train managerial staff, and glad for this opportunity of regular management training. They stated that Kunming Medical College has made a good decision for the training of its hospital managers. Managers expected that the training would particularly be beneficial to the high administrative level of the hospitals and to the medium administrative level, which is also an indispensable link in the hospital management.

I believe that all of our managerial staff hope to get such an opportunity for training. (vice president)

Reform needed for management competency

Survey respondents were asked to nominate the single most important management reform that they would like to see in their hospital that would contribute to improved patient care and efficiency. Most of the responses were coded under 'practice' and 'environment' but nine percent of the respondents indicated that one of the areas for management reform is access to management training.

Many managers commented that there is a common misunderstanding in the country about management and even the policy makers tended to think that a professor is also a qualified president. Under some state policies, the present managerial staff members in hospital are almost all promoted from among medical professionals who are good at their own specialities but not formally trained in management. They argued that this concept needs to be changed from now on:

> *Good medical skills do not automatically lead to high level of managerial ability or success in running a hospital. The administrative environment is changing, and new systems and models are surpassing the old realm of principles and rules. Experience-based management works no more. (vice president)*

> *The government is beginning to emphasis management training for hospital managers. The enforcement of reforms and open policies in the country, has called loudly for the promotion of management, but little has been achieved. (Party secretary)*

Some managers suggested that more managerial training programs should be provided for medical staff, particularly for those who are going to be promoted to managerial positions. Managers hope that pre-promotion training can become a prerequisite for managers in hospitals.

> *In selecting leaders, it is better to let them have formal management training first, to gain certain management knowledge and skills, then let them start their work. (general administrator)*

> *When I was promoted to be a manager, I knew absolutely nothing about management and had strong desire to get trained. But I have not been given the opportunity. If I had been trained before my promotion, my work would have been more effective. (vice president)*

Training strategies

Managers participating in the interviews were asked to comment on approaches to management training which would be suitable for them.

The managers suggested management training programs should aim to improve the performance of managers in their present assignments and to prepare them for more challenging responsibilities in the future. Managers also suggested that because most of the hospital managers are also busy medical professionals, the organisation of the training program should be taken into consideration.

Planning of training

Forty percent of the managers (8 interviewees) indicated that although some management training courses have been given either by the government of Yunnan province or by some universities, little has been done to suit the practical needs of hospitals.

Many managers argued that management should not mean repeating what the theories say but combining theory with the managers' own experience in the hospital situation. A whole set of managerial approaches needs to be developed that are applicable in the work. Managers believed that managerial courses should be presented in the Chinese context and should be adaptable according to their own hospital conditions. They argued that the methods and content should vary depending on the different characteristics of hospitals, such as whether the hospitals are advanced or less advanced, at provincial level or county level. For example, in some remote hospitals, it may be impractical to learn computer skills as computers are not really available. Managers believed that management training would only work effectively when it is combined with practice.

Managers wish to gain new management knowledge which is suitable to the current situation especially knowledge from international experience of which they know little. The managers believed that managers overseas know how to manage hospitals well. Nowadays, many hospitals advocate the adoption of new advanced technologies from abroad, and the acquisition of new knowledge and experiences. Many believe that the more new technology is used the better. But management knowledge and experience have not been used in hospital management in China. Managers argued that it would useful for a management training program to combine the practical situation of Chinese hospitals with advanced overseas management methods.

Training approaches

In-service training was considered as a suitable form of management education for hospital managers. Eighty five percent of the 20 interviewees suggested that judging from the hospital's current situation, in-service training is more practical, because it has less effect on hospital work since most of the hospital managers also participate in clinical practice. At the same time in-service training enables the trainees to apply what they learn, especially for people with some managerial experience. They can also solve some of their practical problems through such practicality-oriented training programs:

> *As medical professionals, we need to work as well as study. Off-service training would lessen our medical skills. In-service training enables us to put what we learn immediately into practice. The hospital's working environment is in fact an ideal base for practical studies. (departmental head)*

> *We can only afford in-service training for these people, because most of our managers cannot leave their jobs. In-service training can still equip them with some necessary managerial knowledge and skills so as to standardise and systematise their management. Another good thing about it is that they can practise as they learn, ie., combine theory with practice. (president)*

Most of the managers are in favour of distance education. That means a training program should have a combination of correspondence and face-to-face teaching. Managers suggested that distance education should be the largest portion of training, complemented by short-term off-service training classes to reiterate important concepts.

> *Hospital work does not usually allow one to leave his/her post for too long. This special way of training allows trainees to consult their teachers about work problems as well as practise what they learn immediately to make their managerial skills very practical. This can apply to a wide range of managerial staff. In other words, it can suit all levels of managers. (departmental head)*

Fifteen percent of the managers (three interviewees) argued that off-service training would be more appropriate. This can make managers concentrate their energy and time. In-service training takes too much time and is slow to take effect.

Conclusions

This research project was structured around a model which related the domains of 'managers' knowledge and skills', 'patterns of contemporary management practice', 'administrative and policy environment' and 'organisational performance'. Data presented in Chapter Five suggests that there is evidence of shortfalls in hospital performance.

My focus in this chapter is on managers' opinions regarding the competencies which might contribute to better overall hospital performance (Snow and Grant, 1980; Wu, 1997). I also sought the opinions of managers regarding management training needs in Chinese hospitals. Several findings stand out from both the questionnaire responses and the interviews.

Needs for generalist basic training in management

There is a widespread agreement among managers that they need management training. Respondents said that no managers, including those at the executive level and the middle level have received formal training in health management. No training in management is required of hospital personnel before promotions are given. It also appears that some managers do not have the background knowledge to identify precisely what management knowledge they need. Managers expect to receive formal management training.

Hospital managers are usually appointed from among medical staff and many people move into management jobs with low levels of confidence, no training and lacking in the necessary competencies. For instance, many executives lack the skills in financial analysis needed for budgeting and financial control and skills in cost accounting that might point to ways of using limited funds more efficiently. Some managers do not have well developed interpersonal skills needed to work with people at different organisational levels. This can lead to poor communication between

hospital managers and their staff members and sometimes to open and recurring conflict. The work of most managers has been focussed mainly on managing day-to-day affairs, with ongoing operations and routine administrative tasks, not long term planning; most managers have not been encouraged to develop a capacity for evaluating the policy environment and the risk-taking which may be needed to move the organisations forward.

This is consistent with Filerman's statement (1979, p. iii) that health care systems generally are undermanaged. Bures (1983) later explained that this did not mean that there are too few people in managerial positions in health care organisations, but rather that some who hold managerial positions have not acquired the skills necessary to manage as effectively as they should, and that ineffective management leads to waste and high cost.

On the other hand, with the reforms of China's health care sector, the hospital system is confronted with rapid changes which are placing enormous demands on providers of care and those who lead and manage the delivery systems. For instance, since government funding for hospitals has been reduced, and hospitals are forced to raise an increasing proportion of their revenue through user charges, there has been considerable devolution of management responsibility to the hospitals, and the managers are facing increasingly complex hospital management problems.

According to Bures (1983), in this dynamic and turbulent environment where accelerating change is prevalent, there is a need for health care managers to acquire and develop the knowledge, attitudes and skills necessary to become or remain effective managers. However, Chinese managers whose experience has reproduced the traditional expectations of highly regulated and centralised hospital systems are not well equipped to meet the changing demands of their jobs.

Findings from this study indicate that lack of training is not a function of personal preference, rather it is that the system does not provide the management development programs necessary to improve the performance of managers in their present assignments and to prepare them for more challenging responsibilities in the future.

I take this as evidence that Chinese hospital managers need a generalist introduction to management to provide a language and basic knowledge to be able to

understand management issues and look for further and more specific skills and to learn more effectively from international experience. Further, strategies need to be formulated to develop management training as part of a planned effort to foster a climate for organisational change and to create a framework for understanding organisational and managerial behaviour so that managers can develop their own solutions to problems in their hospitals (Snow and Grant, 1980).

Needs identified by managers for training in specific areas

Management of people

It comes out clearly from this study that managers regard the management of people as a key aspect of their job and they put a lot of weight on this factor. They indicate that to be successful, they rely on key relationships with subordinates in the hospital, with their peers and with the leadership, while they also state that they find this difficult and have to work hard at maintaining appropriate communication with all people at different levels including internal and external relationships.

The considerable emphasis placed on personnel and inter-personal skills by the Chinese hospital managers is consistent with other studies (Rawson, 1986; Huxley and Bulmer, 1984, p. 11; University of Toronto's Department of Health: Administration Study Team, 1981). Management of people came top of the list of competencies which managers felt they lacked. They rated it as the prime area in which they needed training.

The findings from this study reveal the importance that managers attach to leadership, whether they are talking about what they would look for in a replacement, the weaknesses amongst their colleagues or the need for training. I have commented elsewhere on the challenges that hospital managers in China face in trying to keep staff morale high and improve efficiency and quality of care while they are under great pressure to increase hospital or departmental revenues but have very limited powers over personnel. This sets the background against which the respondents in the study place such importance on leadership and inter-personal influence. It may be partly because managers lack the knowledge and skills to identify and cope with the system

level factors which underly these frustrations that they place such an emphasis on leadership and inter-personal influence.

It can be concluded that hospital managers recognise that the most important influence in their roles as managers is their ability to work with a wide variety of people, and this also has significant implications for managerial training programs.

Background competency

Findings of this research suggest that managers see a need for skills development in transmitting ideas and report writing. This result fits with the findings discussed above which emphasise inter-personal relationships and leadership. In a system where hospital managers lack the power of control over personnel, the quality of their personal communication may be seen as a critical skill for handling various formal and informal interactions.

Management of information

The managers participating in this study emphasise strongly the need for computer training. This is not so surprising in view of the potential uses of modern computer technology in hospitals. However, it may be worth noting how few managers selected the other specific competencies included in this broad grouping (understanding and interpreting statistical data; operational research and systems analysis; evaluation methods; research methods; understanding and interpreting epidemiological information).

The collection and utilisation of information is becoming more and more important in hospital management. Knowledge and skills in data analysis are increasingly important for hospital managers to support their decision-making. Understanding how reports are presented, reading statistics and using indicators can help managers to have a realistic understanding of the quality of care, efficiency and finance of their hospitals.

In Chinese hospitals, however, information systems are not well structured in terms of supporting management decision-making (Wu, 1997). The information and statistics departments in hospitals mainly produce data about the service volume of the

outpatient visits and inpatient cases, cure rate, diagnosis accuracy rate, bed occupancy rate and length of stay based on the returns of these data provided by each department. In fact, some of these data may be of questionable reliability and there are other data which might be more important for the hospital managers in terms of following organisational performance, particularly for top managers. As Wu suggests, Chinese hospitals need an effective system to collect, process, transmit and feedback information which is reliable, timely and relevant to management decision-making.

Management of resources

It appears that managers require additional skills in financial management. This makes sense in view of the greater autonomy and responsibility that managers now have in managing their hospital's financial decisions.

There are surprising differences between the numbers of respondents who identified financial management as a competency (a) which has contributed to their own success (25%); (b) which is important in a replacement (26%); (c) which is lacking among colleagues (35%) and (d) as a priority for training (64%).

This may reflect the incomplete state of development of financial reporting, budgetting and decision-making systems in these hospitals. It seems that budgetting and expenditure monitoring (including reading financial reports) are not part of routine practice for many managers. However, there is a recognition that the introduction of such systems is needed and should be a priority in terms of both systems development and training.

The need for physician managers to obtain skills in the area of financial management is well documented. According to Hillman, Nash, Kissick, and Martin (1988), an organisational decision maker designing a medical care delivery system must know what resources are used by each of the services offered. Herzlinger (1978) and others argue that this is most acute in hospitals where physicians skilled in aspects of financial management could help make difficult choices, and thus improve cost containment and quality of care (Stoelwinder and Clayton, 1978; Berger, 1983; Betson, 1989). Finkler (1982) suggested that skills in financial analysis help managers to plan rational budgets including the best use of sources and fund. Skills in cost-

accounting enable managers to distinguish true costs from assessed charges - a precondition for the more efficient use of scarce resources.

Policy

Chinese managers appear to think of policy mainly in terms of government instructions and managers' responsibilities in terms of being familiar with and implementing Party and state policies. Policy as government instruction is clearly relevant in some situations. However, under the current economic reforms central control is decreasing in favour of local decisions and choices. Under these circumstances the use of direct government instructions as a way of coordinating institutional systems is increasingly inadequate. However, the respondents in this survey do not appear to see their own role as including a pro-active role in relation to policy.

In this respect it appears that the respondents in this study differ significantly from their Western counterparts. The literature suggests that physician managers in Western countries expect to participate in policy making (through policy analysis, program evaluation, health services research, advocacy). This helps to create remedial alternatives to system problems that promote the longer-term efficiency and effectiveness of the organisation (Betson, 1989).

Organisational management

A minority of managers participating in this research have expressed the need to develop a stronger understanding of theories of organisational management (understood primarily as theories of organisation, theories of management and theories of leadership).

With the health care system changes and decentralised decision-making in Chinese hospitals, a good understanding of organisational theory gives managers the language for thinking about organisation development and procedural reform. Modern managers also need access to a range of different theories to provide a language in which to reflect upon and learn from their own practice and to learn from each other in describing, identifying and analysing how their own health care organisations operate

(for example, through action research/ action learning, learning sets, benchmarking and best practice).

Managing change

Relatively few managers identified the management of change and planning for future development among their top three preferences either in terms of the knowledge and skills of importance in their present job, or as serious deficiencies among their colleagues, or of particular important for management training programs. There is a contradiction between the speed of change in the Chinese health care system and the low priority given to organisational change by these respondents.

Of the 22% who identified the need for training in this broad competency area most respondents pointed to the 'analysis of future trends' as the key specific competency they were concerned about.

It could be argued that it is also important for them to understand the processes of organisational development, see the pressures for change coming, to plan for it and to make it happen. Managers need to make a commitment to preparing themselves to participate effectively in change, and need to be appropriately educated if they are to provide the leadership necessary to introduce and sustain organisational change (Wesbury, 1988).

Other areas

It seems that in this study hospital managers were focused mainly on the areas of knowledge and skills which reflect their day-to-day work rather than more strategic areas (such as planning and organisational design) and system issues (such as health system structure and disease prevention).

No clear-cut conclusions can be made about why so few respondents included the broad areas of social and cultural aspects of health, health service context and structure and health planning in the top three preferences. This is partly because of the focus of the questions on the high priorities and the consequent lack of data about the managers' thinking about the lower priorities.

It may also be partly due to the managers' inadequate knowledge of these areas and the fact that not many hospital managers are presently participating in these activities to any great extent. Nevertheless, hospital managers must increase their involvement in these areas if China is to make the most efficient and effective use of the limited resources it is able to direct into the field of health care.

Influence of medical background in manager's role

When asked about the factors which have contributed to their success as managers, the respondents rate their medical background highly. Most managers in these hospitals are appointed from among the hospitals' physicians and they are very aware of the importance of technical knowledge in managing hospitals. Managers are aware of the degree to which they draw upon their knowledge of medicine in articulating planning needs within their organisation and within the health care delivery system. See also Slater (1980, p. 101-06). Their medical orientation is important in improving cost-effectiveness, without adversely affecting quality. See also Ottensmeyer and Key (1988). Kindig and Lastiri-Quiros (1989) argue that because of their medical background (and the expertise and authority which it brings) physician managers can make valuable contributions in all of these areas.

Almost all the managers in my sample, especially the presidential and departmental managers are professors of medicine and medical specialists with a high reputation in their own field. This is consistent with experience in other countries where physician managers are selected because they are good clinicians, not because they have demonstrated management skills (Wood, 1980; Betson, 1989). It has been reported that there can be difficulties in making the transition from clinician to manager successfully (Lawson, 1994). Physician managers are trained clinicians and may lack the conceptual skills required for management, including 'the ability to see the enterprise as a whole... and it extents to visualising the relationship of the individual business to the industry, the community and the political, social and economic forces of the nation as whole' (Ashmos and Mcdaniel, 1991; Katz, 1974; Kovner and Chin, 1985; Shortell, 1989; Stern et al., 1994).

The managers included in this study regard their skills in medicine as critically important to their success in personal leadership and inter-personal influence. Even

presidential managers and many general administrators who have medical backgrounds tend to keep up their clinical work and do not manage full-time.

It may also be relevant that many managers expect to return to clinical practice after completing a period in management and they are keen for this reason to maintain their clinical skills.

In this chapter, I have discussed the knowledge and skills which managers believe they need for management training. The areas which the managers identify as most important are leadership, financial management, use of computers and communication skills. They have a strong expectation that access to such training would make a big difference to levels of management practice and the outcomes achieved by their hospitals. In view of the policy and administrative constraints on hospital performance (discussed in more detail in the next chapter) the expectations which many respondents have of management training may be unduly optimistic. Education in the theories and strategies of leadership and communication skills will not solve the system problems which reduce morale or divert the attention of staff away from best practice. Education in financial management will not solve the pressures of falling government grants and the need to increase revenue.

The objectives of a management training program in this situation need to include learning about the limits of management technologies and building a stronger understanding of the system issues and of ways of contributing to policy development.

Chapter Eight

THE ADMINISTRATIVE AND POLICY ENVIRONMENT

In previous chapters I have focused on aspects of hospital performance (Chapter Five), patterns of management (Chapter Six) and the knowledge and skills of managers (Chapter Seven). This is the last chapter of research findings and focuses on issues in the administrative and policy environment which are likely to affect managers' practice and hospital performance.

In speaking of the environment of hospital work I am referring to: the kinds of problems which hospitals are facing; the levels of resources (funds and expertise) available to address those problems; the prevailing policies and current movements in policy, and the culture (customs and expectations) of the organisations and communities involved.

The environment in which hospitals operate affects their ability to function effectively. Significant changes taking place in the economic environment in China are exerting multiple and complex influences on hospital management (see Chapter Two for a general overview of the contemporary policy environment in China as it affects hospital management). Some of the challenges that hospital managers face in this policy environment include: devolution of financial responsibility from higher administrative levels to hospitals, reductions in government funding, reduced political control, and increasing competition for resources among various providers of health care services. However, the devolution of accountability has not been matched by a corresponding devolution of personnel functions or control over the setting of fees and charges.

The main features of the changing environment of hospital management which were highlighted by the managers participating in this study were (1) the increased autonomy of hospital management; (2) the continuing constraints on personnel practice in hospitals arising from the continuing centralised control of personnel functions by government; (3) the shift from full funding support by government to partial funding

support; (4) contradiction in the accountability requirements for hospitals; (5) perverse incentives associated with the purchasing of equipment and pharmaceuticals in circumstances of partial deregulation of prices under the market economy; and (6) the increase in competition from private clinics and between public hospitals.

Following this brief introduction, I provide a general picture of the administrative environment in which managers are presently working as reflected in their responses to the questionnaire and in the interviews. The specific areas are then discussed in more detail and finally some conclusions are drawn.

The administrative environment

In this section I summarise the pattern of responses to the questions which I have relied upon in developing my account of the current administrative and policy environment for Chinese hospital management.

Recent changes in hospital administrative environment

Survey respondents were asked to list up to three main improvements in the way their hospital has been run over the last five years (Question 12). A total of 929 'improvements' were categorised, under the coding headings of 'hospital performance', 'practice' and 'environment'[1]. Increasing management autonomy was the only improvement which was coded under the heading of 'environment' and there were 53 responses which were so coded (six percent of all 'improvements' coded, coming from 22% of the total 242 respondents,). Respondents from the First Affiliated Hospital and from departmental managers were prominent among those citing increased managerial autonomy as a recent improvement.

Managers participating in the interviews were also invited to identify the improvements and the deteriorations in the way their hospital has operated over the last few years (Questions 9 &10). A total of 81 improvements and 30 deteriorations were coded under the coding heading of 'hospital performance', 'practice' and 'environment'. There were seven improvements and three deteriorations which were

1. See Chapter Five for a more detailed analysis of the 'hospital performance' codes and Chapter Six for the 'practice' codes.

coded under 'environment' (nine percent of 'improvements' and 10% of 'deteriorations', coming from 35% and 15% of the 20 interviewees respectively). Both improvements and deteriorations were all related to the management autonomy of hospitals.

Frustrations, difficulties and problem areas in the managerial position

Questionnaire respondents were asked to list up to three of their greatest frustrations, difficulties and problem areas in their present position (Question 17). A total of 715 responses to this question were coded under the main headings of the coding framework, namely, 'hospital performance', 'practice', 'competency'[2] and 'environment'; there were 378 responses which were coded under the heading of 'environment' (coming from 78% of the 242 respondents), as shown in Table 8.1.

	Overall (%)	Hospitals (%)			Positions (%)		
		First	Second	Third	PM	DM	GA
Mentioning any 'environment' problems	**78**	**88**	**70**	**76**	**92**	**82**	**60**
Personnel policies	55	57	52	63	92	59	38
Management autonomy	19	24	18	11	38	16	24
Funding	16	14	20	5	46	8	31
Accountability	14	16	16		15	16	5
Purchasing	11	12	12	8	31	10	10
Competition	7	7	6	8	15	6	5
Non-respondents	5	4	4	8		4	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 8.1 Frustrations, difficulties and problem areas in managers' jobs (Q17), which were coded as relating to the administrative environment (53% of 715 responses), tabulated against the proportions of respondents who mentioned frustrations coded under each of the headings shown. The percentages are calculated on the basis of the total sample of 242 respondents, and tabulated by hospital and management position.

2. See Chapter Seven for more detailed analysis of the 'competencies' codes.

Interviewees were also asked to indicate 'the most difficult issues facing them personally with respect to the management responsibilities of their job' (Question 3). There were a total of 73 passages in the responses to this question which were categorised under the headings of 'hospital performance', 'practice', 'competency' and 'environment'. There were 31 passages (coming from all of the 20 interviewees) which coded as 'environment', as shown in Table 8.2.

	Interview respondents	
	No	%
Any 'environment' problems	20	100
Personnel policies	10	50
Management autonomy	6	30
Funding	4	20
Purchasing	4	20
Competition	4	20
Accountability	3	15
Total number of coded passages	31	

Table 8.2 Difficulties facing managers (Q3) which were categorised as 'environment', tabulated against the number and proportions of interviewees mentioning particular problem areas.

Reforms contributing to improved patient care and improved efficiency

Survey respondents were asked to nominate the single most important management reform that they would like to see in their hospital which would contribute to improved patient care and improved efficiency (Question 15). There was a total of 533 responses to this question which were categorised under the broad headings of 'practice', 'competency' and 'environment'. There were 240 responses which were coded under the code heading of 'environment' (coming from 51% of the 242 respondents). In Table 8.3 the areas of needed reform are tabulated against the proportion of respondents mentioning needed reforms in each area.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Mentioning any 'environment' reforms needed	**51**	**48**	**53**	**53**	**54**	**53**	**45**
Personnel system	38	47	36	39	54	42	29
Management autonomy	15	15	17	11	39	13	16
Purchasing	13	11	14	13	31	12	10
Accountability	10	7	11	13	15	9	10
Funding	9	9	9	5	31	5	12
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 8.3 The 'single most important management reform which would contribute to improved patient care and improved efficiency' tabulated against the proportions of respondents mentioning particular areas of reform (Q15).

The same question was asked in the interviews and the results are shown in Table 8.4. There was a total of 61 passages which were categorised as responses to this question, coded under the broad headings of 'practice', 'competency' and 'environment' and there were 35 passages which were coded as 'environment' (coming from all of the 20 interviewees). In Table 8.4 the areas of needed reform are tabulated against the proportion of the 20 interviewees mentioning needed reforms in each area.

	Interview respondents	
	No	%
Mentioning any 'environment' reforms needed	**20**	**100**
Personnel policies	14	70
Purchasing systems	8	40
Funding levels	6	30
Management autonomy	4	20
Accountability	3	15
Total number of coded passages	**35**	

Table 8.4 The 'single most important management reform which would contribute to improved patient care and improved efficiency' tabulated against the number and proportions of interviewees mentioning particular areas of reform (Q11).

Specific issues in the administrative environment

Autonomy of hospital management

One of the key directions of contemporary reform in the Chinese healthcare system has been to increase the involvement of hospital management in decision-making, in particular, through the introduction of the CMRS and PRS in 1987 (see Chapter Two). The CMRS applied at the departmental level is referred to as the Head of Department Target Responsibility System. Departmental managers were positive about the increased autonomy available to the head of department under this system.

The CMRS is based on three principles: authority, accountability and benefit; people who are accountable for certain functions should have the authority necessary to discharge those responsibilities and should benefit from doing so successfully. The presidential leaders consider that, "as long as the departments have the authority to match their responsibilities, they will do their best."

This rationale applies also to the departmental responsibility system so departmental finance, for example, should be managed by the head of department without the close involvement of his/her supervisor. The hospital gives the bonus to the department and the department manager decides how to allocate it. In relation to personnel management the situation is more complicated because, despite the introduction of the CMRS, the control of personnel functions is still quite centralised. Nonetheless, the introduction of the CMRS has been accompanied by some loosening of this central control. If senior management wants to allocate a person in a certain department, it must get the approval of the head of the department. If he/she does not accept the proposed recruit, senior management will not force the appointment. Personnel training is also a clear responsibility of the head of department and the role of central administration is just to provide support.

Managers were positive about the increased managerial autonomy[3]. Twenty two percent of survey respondents cited increases in managerial autonomy as one of the

3. The kinds of responses to Q12 (improvement in hospital administration) which were coded as *increased managerial autonomy* are exemplified by: 'under the Contract Managerial Responsibility System, the department has been given certain authority to be responsible for the relevant issues'; 'the

main improvements in hospital operation in recent years (Question 12). This was especially common among the departmental respondents (24%). Likewise 35% of the interviewees (seven managers) mentioned additional autonomy at the hospital and departmental levels among the recent improvements in hospital operations. Most of the departmental managers interviewed indicated (with approval) that the leadership of the hospital now allows the departments the flexibility necessary to function better.

> *Under the Contract Managerial Responsibility System, the department is given more autonomy than before. This brings about good economic profits while the medical service quality is also ensured. In general, our work has improved. (departmental head)*

> *The hospital now practises good policies. The hospital, for example, allows the department to use a percentage of its revenue distribution as a staff bonus. The leadership has done well in stimulating the staff's motivation for work. (departmental head)*

Forty six respondents to the questionnaire survey (19%, see Table 8.1) cited lack of management autonomy among the problems and frustrations of their work. The various problems cited as due to lack of management autonomy fell broadly into two categories, difficulties in the relationships with higher authorities and difficulties between executive managers and Party leaders in the hospital (see Table 8.5). Thirty percent of the interviewees also cited management autonomy among the frustrations which they faced (see Table 8.2). Fifteen percent of interviewees (three managers) cited deteriorations in hospital operations (Interview Question 10) consequent upon the lack of autonomy in hospital or departmental operations.

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government made a better policy in hospital management and the degree of hospital autonomy has been increased'; 'our hospital's progress is compelled by the push of national reforms, which means improvements in hospital and department autonomy'; 'the department head has more management flexibility to operate the department since the hospital has implemented the CMRS which is an important part of national economic reform.'

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Mentioning any management autonomy problems	**19**	**24**	**18**	**11**	**38**	**16**	**24**
Relationship between hospital and its higher authorities[4]	16	20	15	11	38	12	22
Relationship between hospital administration and the Party[5]	7	10	6	5	23	4	16
Number of total respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 8.5 Frustrations, difficulties and problems in relation to management autonomy tabulated against the proportions of respondents who mentioned frustrations which were coded under each of the headings shown. There were 57 comments in total which were coded and analysed within this category.

Thirty seven respondents to the questionnaire survey (15%) mentioned aspects of management autonomy among the areas of the administrative environment needing to be reformed. These are tabulated in Table 8.6. Four interviewees (20%) also mentioned aspects of management autonomy among the areas needing to be reformed.

4. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *relationship between hospital and its higher authorities* are exemplified by: 'the system of multiple leadership by higher-level organs presents hospitals with many management problems'; 'we are facing the problem of how to deal with the relationship between all of our higher authorities'; 'the hospitals have to require higher approval for many management issues such as personnel administration.'

5. The kinds of responses to Q17 (frustration and difficulties in the managerial position) which were coded as *relationship between hospital administration and Party* are exemplified by: 'many managers are not fully supported by the Party secretary'; 'there are conflicts between the administration and Party in many units in China.'

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Mentioning any reforms needed in the area of management autonomy	**15**	**15**	**17**	**11**	**39**	**13**	**16**
Relationship between hospital and its higher authorities[6]	13	12	15	8	31	12	12
Relationship between hospital administration and the Party[7]	3	3	3	5	15	2	7
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 8.6 The single most important management reform coded as relating to management autonomy which would contribute to improved patient care and improved efficiency. There are 39 responses from a total of 36 respondents (15% of 242) which were coded and analysed within this category.

The relationship between hospital and its higher authorities

In speaking about problems in the area of management autonomy, 16% of survey respondents (see Table 8.5) mentioned issues in the relationship between the hospital and its higher authorities; 13% of survey respondents (see Table 8.6) mentioned the relationship between hospital and its higher authorities as an area needing to be reformed.

Many presidential leaders emphasised that the CMRS was intended to shift the focus of operational decision-making from the higher administrative bureaux[8] to the hospital. The contract defines the specific tasks or responsibilities agreed upon

6. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *relationship between hospital and its higher authorities* are exemplified by: 'the hospital needs to be given more autonomy in personnel and financial management so that we could improve the quality of care and productivity'; 'the hospital could be managed more effectively and efficiently if the national reform could pay attention to the improvement of the relationship between the hospital and the government authorities'.

7. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *relationship between hospital administration and Party* are exemplified by: 'the present system of administrative and Party authority co-existing within the hospital is still not perfect and it needs further improvement'; 'the leadership reform should address the quality of the relationship between Party secretary and president'.

8. Among the Provincial bureaux in Yunnan which have authority over various aspects of hospital work are the: PHB (standards, capital funds), Personnel Bureau (staff allocations), Financial Bureau (recurrent funding, price controls), Science and Technology Bureau (research funding).

between the hospital organisation and its supervisory body. Presidential leaders emphasised that one of the key purposes of the National Government in introducing the CMRS was to reduce unnecessary interference by government bodies in day to day hospital management. The government organs were enjoined to see their role as providing services to hospitals rather than treating them as their private dependencies.

In practice, however, many managers feel that their hospitals do not have sufficient authority. Although the government speaks of decentralisation, a thorough reform of the relationship between the various government bureaux and the supervised hospitals has not been made. Managers spoke of serious problems in personnel and finance systems. They claim that increased accountability has not been matched by the increased authority needed to manage efficiently. The reform of hospital management is not being supported by reforms in other areas, in particular, in the government sector personnel system and price control arrangements (details will be discussed later).

> *The constraints and interference from higher authorities hinder the hospital's development. It would be better if our superior units were restricted to macro-scope management, ie., to stipulate general policies and goals, and leave the specifics to the hospital. The government should give the hospital more autonomy. (Party secretary)*

Managers also pointed out that the lack of coordination between the multiple authorities which exercise supervision over the hospital also affects decision-making negatively. The hospitals included in this study are subject to direct operational supervision from two main authorities, namely KMC and the PHB.

> *We have to be accountable for all of the tasks assigned by higher authorities. It would be ideal to simplify administration and allow more autonomy in the hospital. We should reform our administrative system. A hospital can only have one single superior unit. But in fact, we have to listen to KMC as well as the PHB. We have no autonomy. (president)*

The relationship between administration and the Party

Around eight percent of survey respondents cited the relationship between hospital administration and the Party as a source of frustration and problems (Table

8.5) and around three percent of respondents identified this relationship as a priority area for reform (Table 8.6).

Several managers (not Party secretaries) reiterated the principles underlying the 'president responsibility system', namely that the president was to assume a position of unified leadership, command and overall responsibility for the internal and external operations of the hospital. Party organisations in hospitals were now called upon (by the policy) to 'actively support presidents in exercising their authorities', while retaining a supervisory role with respect to the implementation of Party and State policies.

Managers referred to the Party's traditional authority in the hospitals and previous patterns of involvement in matters of management control. They stated that, although the reforms have broadened the roles of hospital executives, Party secretaries and Party cadres still play an influential role in most hospital decisions, whether they do so actively or simply through their capacity to intervene.

However, several managers spoke of conflict arising on account of the blurred boundaries between what continue to operate as two parallel hierarchies of authority and accountability. Sometimes these conflicts arise because of policy differences and sometimes because inter-personal tensions affect decision-making. Several managers expressed the view that if the relationship between Party officials and cadres and hospital executives could be coordinated better, it would greatly enhance the development of the hospital.

> *In my opinion, if the president and Party secretary put their position properly, the work can be done smoothly. If not, their relationship will be a hindrance in their work. However, most units have difficulties dealing with the problem. (president)*

> *It would be ideal to combine the Party with administration, as can be exemplified by KMC's president and secretary in one person and the same with the PHB's top leader. If we follow suit, it would be easier to lead the hospital. This would reduce some unnecessary conflicts in management. (vice president)*

A somewhat different position was expressed by interviewees who are active in the Party. One interviewee emphasised that since the CPC has been stipulated by the

Constitution as the central leader of China, hospitals shouldn't shift hither and thither, right and left. The Fourteenth Central Committee put its emphasis on collective leadership and decision-making, including the re-inforcement of the Party's leadership through the system of democratic centralism, which has demonstrated its benefits. Under the procedure of transition toward the economic system, it is important not to lose control, and there currently exist a lot of problems. The Party supervises its Party members and cadres, and the role of the Party committee is to supervise and guarantee.

> *I have been working as a Party secretary for many years, and I know the importance of coordinating with the president. When dealing with the president, I try to seek common ground while reserving my differences, for I know that we have a common goal. However, I have my own principles and flexibility while handling some problems. (Party secretary)*

Restrictive personnel policies

The personnel system operating in contemporary Chinese hospitals reflects its origins in the centrally planned economy established in 1949. From 1978 and the commencement of economic reform, market mechanisms have assumed increasing importance as instruments for achieving the Government's broad policy objectives, replacing, at least in part, the traditional reliance on administrative guidelines and planning standards. However, while personnel policies and practices in the State run sectors are being changed gradually most still reflect the old system. Many areas of personnel management, including policies regarding recruitment, dismissal and salaries are still determined by the National authorities.

Liang and Feng (1996) state that personnel practice in Chinese hospitals is still driven by State-level personnel management policies which have changed little under the economic reforms. They argue that restrictive personnel policies are holding back productivity and efficiency in Chinese hospitals.

On the one hand it is important to recognise that there are policy imperatives operating at the central level which count against a rapid devolution of personnel control in the health sector. One such factor is unemployment which has increased significantly in several sectors of the economy following the devolution of personnel

and other functions to the enterprise level (Child, 1994, p. 170). The relatively low wages paid to medical personnel reflect the need to keep total health expenditures down so that poor people can access medical care (World Bank, 1983, p. 51; 1992, p. 99-100). However, it is clear that personnel policy is one of the most important areas which hospital managers are concerned about. The analysis reported in this chapter was directed to examining how current policy settings with respect to personnel management are affecting managers' practice and organisational performance in Chinese hospitals.

In the questionnaire survey respondents were asked to identify the greatest frustrations and problem areas in their present position and to nominate the most important management reform which would contribute to improved patient care and improved efficiency. In both cases the most common code assigned to their responses was 'rigid personnel system': 55% of responses to the question about frustrations (see Table 8.1) and 38% of responses to the question about priority needs for management reforms were so coded (see Table 8.3).

One hundred and thirty four respondents (55% of the total 242 respondents) mentioned difficulties in the personnel system among the frustrations that they are facing in their practice (Question 17). There were 134 comments in total which were coded and analysed in terms of four sub-categories: staff remuneration, no power over dismissal, size of staff establishment, and limited power over recruitment as shown in Table 8.7.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Mentioning any personnel policy problems	**55**	**57**	**52**	**63**	**92**	**59**	**38**
Staff remuneration[9]	26	20	36	18	53	26	21
No power over dismissal[10],	22	24	23	13	46	22	17
Size of employment establishment[11]	21	15	11	34	31	22	14
Limited power over recruitment[12],	17	15	15	24	31	18	10
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 8.7 Frustrations, difficulties and problem areas in respect to the personnel system (Q17). The codes referring to more specific frustrations with the personnel system are tabulated against the proportions of respondents citing problems in those areas.

Ninety five respondents cited issues in the personnel system in their response to the question about priority areas for reform (Question 15). As shown in Table 8.8, the areas identified by managers for priority reform in the personnel system involve:

9. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *staff remuneration* are exemplified by: 'the government policy in our country has some problems, medical staff receive very low salaries compared with other service trades'; 'the government needs to improve the poor situation of intellectuals, including medical staff'; 'at present the hospital depends on the bonus system to motivate medical staff to work hard which also brings some negative effects and some problems in management. Could the government have a better policy to improve this situation?'

10. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *no power over dismissing* are exemplified by: 'as a hospital senior manager I have no power to dismiss anyone who is not competent in his/her position'; 'the personnel policy in our country doesn't allow us to dismiss any unqualified staff; 'people don't listen to me at all because I have no authority to dismiss anyone.'

11. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *size of staff establishment* are exemplified by: 'the hospital is not able to determine the size of its employment establishment'; 'the staff establishment in our hospital is unbalanced and the hospital is facing the problem of insufficient clinical staff'; 'the government bureaux have too rigid controls over the number of hospital staff which affects the quality of care in our hospital.'

12. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *limited power over recruitment* are exemplified by: 'although the hospital operates under the Contract Managerial Responsibility System, our higher authorities still control staff recruitment and we cannot employ anyone without getting permission from the Government'; 'under the present personnel system, we don't have any managerial flexibility in staff employment'; 'the staff recruitment in our hospital is not based on the work requirement but we can do nothing about it

control of size of staff establishment, control of recruitment and promotion and control of dismissal and penalising.

	Overall (%)	Hospital (%)			Position (%)		
		First	Second	Third	PM	DM	GA
Mentioning any reforms needed in the area of personnel policies	**38**	**47**	**36**	**39**	**54**	**42**	**29**
Control of size of staff establishment[13]	29	40	20	29	15	33	17
Control of recruitment[14]	17	15	17	14	23	19	10
Control of dismissal[15]	8	12	4	11	31	8	5
Number of respondents	**242**	**91**	**113**	**38**	**13**	**171**	**58**

Table 8.8 The single most important reform (in the personnel system) which would contribute to improved patient care and improved efficiency (Q15). The areas of personnel policy, where reform is seen as necessary, are tabulated against the proportions of respondents citing issues for reform in those areas, overall and by hospital and position.

Staff remuneration

The economic reform program has brought some major changes in wages policy in China, especially in state-owned enterprises. The Chinese leadership aims to use both material and moral incentives to encourage productivity and efficiency. Deng Xiaoping (1984, p. 117) called for "distribution according to the quantity and quality of

because of the restrictive system.'

13. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *control of size of staff establishment* are exemplified by: 'the hospital should have more autonomy in setting up the number and proportion of our staff'; 'we need to change the imbalance in staff proportions by reforming the personnel system'; 'the government should not limit the hospital by setting up personnel quotas.'

14. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *control of recruitment* are exemplified by: 'the staff hiring system in our country needs to be reformed'; 'the hospital needs to control the staff recruitment strictly and the higher authorities should not attach any conditions that the hospital takes on more people who may not possess the requisite skills and capabilities'; 'the hospital should be given more autonomy in hiring staff members according to its needs.'

15. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *control of dismissal* are exemplified by: 'one of the important reforms in the hospital management is to give the managers a certain authority in managing people such as staff dismissal'; "the iron rice bowl' needs to be reformed by setting up a good staff dismissal system in hospital'; 'the hospital should be given

an individual's work" such that "a person's grade on the pay scale is determined mainly by his performance on the job, his technical level and his actual contribution."

Modern China has inherited and still supports a low salary, high welfare system. Staff remuneration in Chinese hospitals generally includes the basic salary, bonus payments and 'in-kind' welfare services such as housing, support for children's education and health care. The basic salary depends on a person's professional title or grade and experience according to guidelines which are determined by the central government. There is no direct relationship between the job held and the level of salary nor between payment and quality of work done.

From the beginning of the reforms, managers were encouraged to use bonus payments to reward good performance and punish poor performance and the percentage of total remuneration represented by bonus payments increased very fast. Hospitals and departments have wide discretion in determining their bonus payments for staff and in deciding how bonuses shall be distributed.

One of the consequences of the central controls over salary levels and the rapidly increasing use of bonus payments to motivate staff has been that bonus payments, as a proportion of total remuneration have increased dramatically in recent years (Laaksonen, 1988, p. 256). This has created new distortions in remuneration relativities since bonuses are determined largely by the financial success of the department and hospital and not the professional seniority or training of the individuals or staff categories. It is quite feasible for waitresses to earn more than surgeons (see below) under this system. In recent years senior managers have been urged to ensure that bonuses are paid in ways which serve to widen the differentials between mental and manual work and work of different skill (Laaksonen, p. 254; Child, 1994, p. 186).

As indicated in Table 8.7, problems associated with low levels of staff remuneration were the most common coded within the broad coding category of 'problems in the personnel system'. Twenty six percent of respondents mentioned that the staff remuneration was poor in hospitals. Thirty percent of the 20 interviewees commented that medical staff have low salaries and insufficient social welfare in

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more authority in dismissing unqualified staff.'

comparison with other service trades in China and more than 50% of the interviewees argued that remuneration policies need to be reformed.

Most of the managers interviewed commented on the relatively low total remuneration paid to medical staff compared with that of other service trades, particularly in view of their length of training and their responsibilities. These managers believe that low incomes (and the anomalous relativities) weaken doctors' enthusiasm and commitment to their work:

> *Professors and senior doctors are paid less than waiters. The earning system in our country is quite unfair. (general administrator).*

> *There is a popular saying that encapsulates the current situation: 'the surgical scalpel is no better than the barber's razor, and the barber's razor is no better than a water-melon knife. (vice president).*

The bonus system has been widely used as a major incentive in Chinese hospitals and there is no doubt that it was initially welcomed by hospital staff and that it has contributed to some striking improvements in staff productivity and the efficiency of service delivery. However, in this study interviewees expressed concern that the widespread use of bonus payments and the degree to which staff are dependent on bonuses for their total income may be creating unforeseen and perverse incentives. They spoke about staff members who are under pressure to receive commissions, such as for referrals to private clinics and the purchase of medicines and equipment (details are discussed in Chapter Six).

Several managers cited instances where departments had initiated patient charges for particular services (in some cases contravening hospital rules) in order to increase departmental revenue (and therefore be in a position to pay increased bonuses to staff). A presidential level interviewee cited as an example the changing of the dressing for a post-appendectomy patient which (including all associated expenditures) should cost the patient 5RMB according to the standard schedule of fees issued by the government. However, in one department this was judged to be not enough and separate charges were made for the medical materials. In an obstetrics department, parents were charged for immunisations in the neonatal period although the same immunisations are available free of charge from the community prevention centres. The same department

was also among several obstetric units which were criticised by the World Health Organisation for selling milk powder to parents. Several interviewees pointed out that once one department starts moving in this direction it increases the pressure on the managers of other departments to do so:

> *These actually broke the rules of the hospital. Staff in departments which have the lower bonuses complain that they have lower incomes compared with colleagues in other departments and they urge their managers to look for new ways to increase departmental revenue and bonuses. They try hard all day to think about how to make money and allocate the bonuses. This encouraged bad practices. (president)*

A few interviewees argued for scrapping the bonus system because of such distortions. They suggested that the hospital should pay adequate salaries to personnel according to their professional skills and their actual work. For example, as a nurse, the present salary and bonus together is 1000RMB per month. The hospital should simply pay her a salary of 1000RMB to make her devote her time and energy fully to her work. 'If she cannot do her work well, then decrease her salary and give her 300RMB'.

> *If the national reform can address the question of doctors' incomes and increase directly their salaries, then the doctors will not spend so much time considering their incomes and they will spend more time and energy on patient care, teaching and research. The hospital could then develop better methods of administration, which will not force departments to focus so much attention on revenue raising (departmental head).*

> *The salary policy has short-comings and causes low morale among the medical staff. Medical staff think that, compared with their overseas counterparts, their value is not recognised, so it is taken for granted for them to receive something from patients. The benefits, to the hospital system, of improving the situation of medical professionals would greatly exceed the costs (Party secretary).*

Some managers indicated that economic reform had disrupted hospital work including a high level of staff turnover, among doctors and nurses, due to the low

payment. Many medical professionals do not return once they have gone abroad and this has affected the quality of medical care in these hospitals. "We are facing new problems of staffing stability' (vice president).

Dismissal

The dismissal of personnel remains a delicate matter in China. Traditionally, the work unit has been responsible for the welfare of its employees and their families from cradle to grave. It has not only paid their salaries, but also provided accommodation, social welfare and health care. Managers have been reluctant to sack staff. Dismissal has meant not only cutting off their income but also access to welfare and disruption to their social life as well. Any dismissal of an employee, even for gross negligence or violation of work rules, still requires the authorisation of the relevant government authority.

Frustration associated with their limited power over dismissal and staff discipline was the second most common category of 'problems and frustrations' (elicited by Question 17) within the broader coding category of 'personnel system' (see Table 8.7), particularly among presidential managers. Eight percent of respondents cited the need for greater managerial control over dismissal and discipline as an area for priority reform (see Table 8.8).

Over 50% of the interviewees commented that workers cannot be discharged no matter how badly they behave. Once someone becomes a member of the hospital staff, then the hospital must let them stay even if they are not qualified. They have been appointed to their present positions and are entitled to all of the rewards and benefits of that appointment. For managers, however, the lack of power to discipline and to dismiss staff causes many difficulties:

> *The most difficult problem for managerial leaders in China is that of limited authority because the leaders have no right to dismiss people. You have very limited options if your orders are not carried out. For instance, nurses who repeatedly demonstrate a bad service manner with patients, including conflicts which have bad effects in the rest of the department, cannot be dismissed. This is why some doctors and nurses do not listen to the head of the department.*

Although personnel counselling is advocated, it is not easy to carry out. (vice president)

The area in dire need of reform is the personnel system. Our hospital should be given more autonomy over personnel decisions. We should be able to keep or dismiss staff members according to the needs of the hospital and the individual's work achievements. At present I want to dismiss quite a few incompetent managers but I cannot. They are either someone's relatives or friends. I have no power to deal with the situation. I can only wait for their retirement but unfortunately I myself may retire before some of them do. If this problem could be solved I would be able to make better appointments to the managerial staff and this would greatly enhance our work efficiency. (Party secretary)

The biggest problem among the management issues in the hospital is I have no authority to dismiss those who are remiss about their jobs. The personnel system has to be reformed if the hospital is to develop. I wish to employ some outstanding people in management positions, particularly in financial management; my dilemma is that I don't know how to get rid of the old ones. (Party secretary)

The biggest problem is the issue of responsibility and authority. Many department heads and head nurses wish to do their job well but they are hindered by many factors. One factor is that they have no power to remove incompetent people. The present personnel system is a major hindrance to effective and efficient management and it needs to be reformed but it is hard to achieve. (general administrator)

Most of the doctors in our hospital were not trained to treat cancers so they have had to make some adjustments in learning to do their jobs. Some of them worked very hard and adjusted relatively quickly. Some of them adjusted more slowly and are still not competent. According to the present system in our country we cannot let people in this latter group go. Although we have established standards which they are not able to meet we can do nothing with

them. Punishment and rewards cannot be serious if we cannot dismiss people. (vice president)

Size of staff establishment

Hospitals in China are allocated a fixed number of staff by the responsible government bureaux. Hospitals are not permitted to discharge staff even if they are over-staffed nor can they recruit new staff if they are short-staffed. This can lead to situations where there are more people than are needed, or inadequate numbers for the work which needs to be done, or imbalances between available staff categories and the nature of the work to be done (since the setting of the staff establishment is not closely tied to work requirements).

Imbalances between the skills profile of the existing staff and the kinds of skills which are needed for the operations of a modern hospital are exacerbated by the continuing depletion of doctors and nurses in clinical positions as clinicians are moved into administrative positions and the government's need to find jobs for people (many of whom do not have technical training). One significant source of these recruits who have to be placed are people retiring from the PLA.

Twenty one percent of all respondents (242) considered that their hospitals are facing problems of inappropriate staff establishment (see Table 8.7), in particular, imbalances in staff proportions and insufficient clinical staff. As shown in Table 8.8, 29% of respondents identified the control of their staff establishment as one of the key issues for reform.

Forty percent of the interviewees mentioned the problem of insufficient professional staff (the lack of balance between beds and doctors). The imbalance is made worse by the many additional tasks which the hospitals are required to do by their supervising authorities including sending medical teams to the countryside, teaching students, operating branch hospitals, contributing to health promotion and participating in professional titles examinations. Many departments have only seven or eight doctors and after despatching staff to these additional tasks there may be only two to three doctors on duty in a department. Under these circumstances inadequately trained staff are often required to take on responsibilities for which they are not

competent. As a result it is very hard to ensure high-quality medical care. Several managers commented that it is hard for medical staff to ensure good service manners under these conditions.

> *When a doctor in the respiratory department has to diagnose 100 outpatients per day, he cannot force out good manners. We need to equip the hospital with staff members in proportion to our work load and make proper use of our human resources. Our hospital should have more autonomy but the Health Bureau controls us too rigidly. (departmental head)*

The lack of clinical staff is made worse by the movement of doctors and nurses into management positions and the large number of imposed appointees who can only serve in administrative and supply service positions (see below). The excessive numbers of such appointees in administrative categories sometimes exceeds the quotas for such categories leading to compensatory restrictions on the number of clinical appointments.

> *The present personnel system in our country limits the development of hospitals. A hospital needs to be given the autonomy to adjust its workforce in accordance with the requirements of its work and development. The state should not limit the hospitals by personnel quotas. But this problem cannot be solved in a short period of time. (Party secretary)*

> *We have too many staff members, judged against the official ratio of personnel to beds, but we still suffer a lack of clinicians. Such problems have received attention from the MOPH, the PHB and the hospitals themselves. There has been no solution. Probably we need to start at the root of these problems, that is, the personnel system. (general administrator)*

Several managers spoke of problems of insufficient nursing staff. According to the new regulations issued by the PHB, the ratio of the beds to nurses should be one to 0.5 but the ratio in these hospitals is 1:0.3 to 0.4 (director of nursing). For example, there are 40 beds in one burns department and there should be 20 nurses but, at the time of these interviews, it had only 14. In the nephrology department there are nine doctors plus four interns but only nine nurses so the number of the doctors exceeds that of nurses.

There are tens of staff with nursing qualifications, but not many working in the clinic. At present, nurses can only deal with their daily work, there is no way they can work to improve nursing quality or undertake research. (vice president)

In one recently established hospital the ratio of doctors to nurses is 1:1, (whereas the ratio stipulated by the PHB is 1: 1.5 to 2). Interviewees described how, when it was first established, the hospital had transferred from other health units a large number of administrators, in some cases through *guanxi*. Interviewees stated that this has produced a problem of unhealthy staff proportions.

We are going to strictly control any increase in employment of administrators instead of nurses. Staff proportions are linked with service quality. When we solve the problem of insufficient nurses then our service quality will naturally improve. (vice president)

Our hospital is not allowed personnel autonomy. The hospital does not have enough nurses; we are unable to implement the responsibility system in nursing. We can only have a functional system in nursing, which is one of the crudest ways of nursing. The nurses follow verbatim what the doctors prescribe for a patient and are allowed no flexibility to make their own decisions so they have no positive attitudes toward their work. The state requires hospitals to implement systematised nursing but the problem in our province is that we lack enough staff and other conditions to do it. (general administrator)

Recruitment

In China, where a hospital is expanding and needs additional staff, the normal method is for the hospital to ask its higher authority to allocate the staff to meet its needs. The extent to which the hospital can then actually choose from the staff who are available depends on the relationship between the hospital and its higher authority. Sometimes they may simply have to accept the people who are allocated. In other cases they may be able to look at the files of the potential recruits and have some influence over which ones come to their hospital. In addition to the normal method of recruitment there are, of course, a number of informal methods which the hospital has to accept. For example, the hospitals' higher authorities may ask the senior hospital

managers, or the senior managers themselves may be able to get permission to recruit relatives or other people because of their personal connections.

Staff recruitment was listed by 21% of the survey respondents as one of the problem areas which they are facing in their present positions, with over 17% of respondents complaining about their very limited power over the recruitment of staff (see Table 8.7). Recruitment of staff was also listed by the respondents as one of the areas for reform, 17% of the survey respondents making some reference to it (see Table 8.8).

In the interviews many hospital managers also spoke of the problem of nepotism within the Chinese personnel system. They referred to hospitals hiring their staff's children and relatives, or hiring relatives and other people who have a personal connection with their higher authorities and senior managers. As the number of staff with personal connections inside a hospital increases, it becomes more difficult to implement reward and discipline policies, to assign jobs and to manage conflict among staff members. In addition, they argued that this way of hiring staff makes it more difficult to ensure the quality of staff and the overall quality of employees may be gradually decreased:

> *The PHB will not give the person we want. They force us to accept someone that we don't want. If you want to have the best staff you may also have to accept one who is not so good. The system is like this. How can one compete with nepotism and the network of relations? (vice president)*

> *There are too many who get into our hospital through relationships (the various nepotisms). We can do nothing about it. It's because the personnel system in our country is too rigid. The burden that the hospital has to carry has become more and more heavy. If this person is assigned to you, dare you not accept him? (Party secretary)*

> *When we employ someone, how do we measure his ability? This is a common problem. Every time someone is about to come, he is said to be very capable. And once he is employed we find him totally incapable of his work. How to arrange his future work becomes our headache. We have investigated different departments and found the same thing. If we had a better personnel*

management process and we could make stricter assessments of potential new employees then we would have more capable staff. (departmental head)

All the interviewees from one particular hospital complained that their hospital is quite remiss in accepting new employees from hospitals in the counties, "who are old in age and experience, poor in professional level, and hard to manage." For example, in 1996, when the hospital was assessing people for the professional titles of associate professor and associate director-doctor, the hospital was only able to select five people and failed to meet the target of 17, because people failed to qualify no matter how the hospital leadership assessed their capabilities[16].

One interviewee from this hospital told of a doctor who, prior to being transferred to this hospital, claimed that he had the ability to do a radical operation for rectal carcinoma (and that he had done 40 cases of this type of operations). In fact, after his appointment it appeared that he was not willing to do one single clinical operation. Every time the managers arranged an operation for him, he would disappear, citing a range of excuses. Another doctor was transferred to the hospital under similar circumstances and has been working in internal medicine since 1992. Yet even now four years later he still needs the direct supervision of the head of the department for basic tasks such as clinical examinations and diagnoses.

This shows that some of our staff have poor medical skills and that our hospital's personnel administration is problematic as well. All the new employees come through relationships. Several of ...'s former classmates, who were regarded as good doctors in their county hospitals, have come to our hospital, which is a provincial-level one and has much higher demands on doctors. Now they come to us and demand senior professional titles, while strictly speaking they are not even qualified as associate director-doctors. (departmental head)

16. There are two systems of titles operating in university hospitals such as those included in this survey, depending on whether their position is sponsored by the PHB or the Education Commission (through the university). The Health Bureau titles range through 'director-doctor', 'associate director doctor', 'doctor-in-charge' and 'resident doctor'. These titles correspond to the academic titles of 'professor', 'associate professor', 'lecturer' and 'assistant teacher'.

The hospital's rules and regulations of personnel management need to be improved. Our problem is obvious: staff employment is not based on the hospital's work demands. This hospital has been forced into hiring many unqualified medical professionals and administrators through all sorts of relationships. Consequently, our staff organisation is disorderly and many departments are literally doing nothing. Our burdens are heavy and economic profits are not good. (vice president)

In the area of personnel administration our hospital has had some lessons. The blame should not go to our presidents because the personnel system itself is problematic. As a new hospital, many new staff have been recruited to our hospital through various relationships. In fact, they often turn out to be unqualified and quite unsatisfactory to hospital work. (deputy Party secretary)

Our hospital's personnel system is not based on assessment of professional skills. It is mediated by relationships. In my opinion, the hospital should only take people who have high levels of professional skill and young people rather than just through nepotism. (general administrator)

Other aspects of the personnel system

Managers participating in interviews also spoke about problems associated with older professional staff and the selection of managers in their hospitals[17]. The hospitals are faced with the challenge of making better use of their younger professionals whilst also harnessing the experience, expertise and wisdom of the older professionals. Several managers pointed out that, in accordance with the strong Chinese tradition of respect for the wisdom of older people, there is an expectation at the leadership level in many hospitals that older people make outstanding doctors and administrators. In keeping with this expectation promotion is not linked with one's achievement so much as one's age and work experience. In times of rapid technological change this approach has some drawbacks.

17. In the following section there are several references to 'older people' in professional and managerial roles. These are generally references to people in their late fifties and early sixties. The compulsory retirement age is 60 but some people stay on beyond this age.

Managers argued that the hospitals should make more use of young and middle-aged professionals. One manager stated that in Yunnan University and Kunming Technical Institute, 30% to 40% of middle level managers are in their thirties. He compared this situation to that prevailing in the KMC and in its affiliated hospitals where (he claimed) the average age of the presidential managers is over 50. This retards the development of younger professionals and diminishes their incentive to strive for advancement:

> *The younger generation have a wider range of knowledge and new concepts and readily accept new things. They have strong abilities in absorbing and digesting new information. They are also strong in comprehensive, coordinative management skills. (Party secretary)*

> *The older professionals have proven incapable of management, because, although they are quite accomplished in their own specialities, they often have no managerial competence and they are not able to meet the demands of the job. This also hinders training and promotion of the department's younger generation. (vice president)*

> *Certainly young people should respect the old generation but when the professional development is at stake, these people often prove outdated in terms of advanced skills and fail to convince the young people. The personnel system has to be reformed, the management strengthened, and the work efficiency enhanced. (departmental head)*

> *The unreasonable personnel system has now caused a worsering of medical care services. We don't like the present unjust personnel system. It suppresses capable professionals' functioning as well as hinders the development of our department and hospital system. (departmental head)*

> *We have several people of old age and high seniority who are acknowledged by everyone in our hospital as being not up to standard in their surgical skills. Some cannot even handle a gastrectomy. In spite of this, they are requesting promotion to directive-doctors. I have talked to our presidential leaders about transferring these people to other, more suitable positions so that they can make their contribution there, while our department's young doctors*

can fully make use of their potential. Only by these means am I able to manage the department well. (departmental head)

Several managers were concerned about the selection of managers. Some presidential managers indicated that the selection of the hospital's managerial cadres is mainly based on assessment of their length of service. This results in great difficulties in hospital management. Another problem is the leadership can only choose the head of department from amongst the existing departmental staff but sometimes there is no suitably qualified person. In such circumstances the least inappropriate person will be appointed, whether or not they are qualified and suitable:

Many problems in the hospitals have to do with the quality of managers, because they have poor professional capabilities and even poorer experience and knowledge about management. (Party secretary)

The range of candidates for managerial appointments is quite limited and we think this is a big problem. It involves the State's policies on selection and removal of cadres. Should they be based on assessment of relationships or competence? (Party secretary)

Decreasing government funds

Survey respondents identified decreasing government funds for hospitals as one of the major problems confronting them in their present positions[18] and identified the need for reform in this area[19]. Sixteen percent of responses to the question about

18. The kinds of responses to Q17 (frustration and difficulties in managerial positions) which were coded as *decrease of government funds* are exemplified by: 'we are facing the problem of insufficient funds from the government and it hinders hospital development'; 'under circumstances of reducing government funds and increasing costs, the department has to consider various way to generate money'; 'the hospital will not have resources available for staff development and social welfare if the government keeps cutting the funds.'

19. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *decrease of government funds* are exemplified by: 'when the government sets up a policy such as the progressive reduction in government funding to hospitals, they should also consider how to lead the hospitals to consider the social effects and professional development implications; not only push the hospital to increase its revenue'; 'we should improve and perfect the hospital funding system'; 'the government needs to consider investment in hospitals in terms of their role as important social welfare organisations in China'; 'the hospital would provide better quality of care and increase the productivity if the government could put in more money to help the hospital.'

frustrations and nine percent of responses to the question about priority needs for management reforms were so coded (see Table 8.1 and Table 8.3).

The interviewees recognised that China is in an age of economic change. As part of the economic changes, hospital funding in China is moving from full government funding support to partial funding support. Hospitals presently depend upon government funding plus revenue from user charges. The government contributes a sum equivalent to 30 - 60% of staff salaries (30% in the case of provincial level hospitals). Revenue from user charges is now the major source of income for hospitals from which they need to finance routine operations, staff welfare and development. (See discussion in Chapter Two.)

Unfortunately, the introduction of market mechanisms to the funding of hospitals is complicated by inflexibilities in the price setting mechanisms and the need to provide services to the large number of very poor people who are not able to buy services at the cost of production. China is a developing country with 98 million people living in deep poverty (World Bank, 1997, p. 36), five million of whom live in Yunnan. The number of people in the rural areas who have health insurance cover, which includes provision for hospital care, is very small. Very few of the hospitals' patients would be able to pay for medical care if the hospital charged them in the accordance with the cost of providing that care.

The fee levels that hospitals are allowed to charge for medical consultations and inpatient stays are all state-controlled, with no pricing autonomy on the part of hospitals. The fees charged for medical care are much lower than the cost of production. There are three exceptions to this situation: pharmaceuticals, fees charged for services which are dependent on high capital cost equipment, and fees for services which have high capital costs but very low marginal costs.

The control of pharmaceutical prices is in a 'grey area' between State-control and the market economy. Since the pharmaceutical suppliers are operating in the market economy their prices are subject to less stringent control and the retail prices set by the hospitals are likewise subject to less strict control (more detail see Chapter Two and Six). The fees which hospitals are allowed to charge for services which rely on high cost equipment such as MRI and CT scans are not so tightly controlled,

perhaps in part because of the consciousness of government officials of the need to get some return on the high investment costs. Automated diagnostic equipment (in biochemistry and haematology for example) is a special case here because of the very low marginal cost per test once the equipment has been procured. In all three of these areas hospitals have greater discretion (as well as incentive) to maximise revenue through increasing volume.

Hospital funding is thus caught between two poles of inadequacy: one of reducing government funding and the other of limits on the revenue which can be earned through user charges. The two areas where hospitals are able to increase revenue are: first, through selling more medicines and second, through maximising the use of high technologies, especially those with low marginal costs.

Managers from one of the hospitals stated that their hospital is facing a serious revenue shortfall. Because of this hospital's location, its patient source is mainly workers (from State owned enterprises) who are covered by (very limited) labour health insurance. Government officers with (much more adequate) health insurance also come to the hospital for treatment yet there are only around 3000 of these of which hospital staff count for more than a third[20].

The managers pointed out that the nearby State-owned enterprises (including mainly factories and the mines) are facing financial crises of their own, and in some cases are unable to pay their workers' their wages and salary entitlements. In many cases units have reduced the outpatient benefit to as little as 50RMB per year. Retired workers may be denied any outpatient benefits. Some factories are not able to pay their share of the costs of inpatient care to patients who are notionally covered by their plan. The hospital has over one million RMB in outstanding debts and is under great pressure economically.

This hospital is clearly caught between the two poles of policy inadequacy. The government restricts the funding available to the hospitals and controls the levels of

20. The standard model for health insurance provision (covering workers in State-owned enterprises and Government employees) includes an annual universal cash payment (included as part of total income package) which varies from as low as 50 to200 RMB per year which notionally covers the cost of outpatient care, and a co-payment arrangement for in-patient care whereby the consumer pays

fees which it can charge (even to people who can pay). However, many families and their units are not able to meet the official charges, much less meet the real costs. Nevertheless when sick people come to see the doctor, and in some cases need to be admitted, the hospital has to help them and bear the cost.

> *We have to treat their illness first. When they have the money later, they will return the money to us. We have to help the State to undertake some of its burden. (vice president)*

On the evidence provided by these managers the current arrangements for health care funding are quite problematic:

> *With the new reforms, the hospital has had a hard time adjusting itself to market economy. On the one hand, the hospital has to give some social welfare benefits to patients, on the other hand, the state provides only partial funding, namely 40% of the staff's salaries. All of the staff's social welfare and housing costs have to come from the hospital's own profits. It has caused many problems, and adds to the president's workload. (vice president)*

> *We have to further clarify the nature of the hospital. If the hospital is to carry a welfare function and provide free or subsidised care, the State should provide adequate funds. The State does not provide adequate funds and as a consequence there are further restrictions on the amount of money available to pay hospital staff. Compared with other businesses, the income of medical personnel is low and this has some negative effects, contributing to bad service attitudes towards to patients, overuse of hospital resources in order to make more revenue, and a willingness among medical staff to accept commissions. (Party secretary)*

> *As hospital leaders, we care about the medical and nursing personnel's work and life. If we are to be able to pay our staff a reasonable amount we need to be able to increase our charges by reasonable amounts taking into consideration the rising costs in the economy generally. Presidential leaders are now loaded with concern that some day some hospital staff will not have*

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around 10-20% (varies with plan and length of service) and the employing unit pays the remainder of the bill.

enough to eat. We have a strong sense of impending risk. The annual allocation from the government corresponds to only enough for three months salary for the whole staff of the hospital or for pension payments to retired staff. Under these conditions, it is impossible for the hospital not to consider strategies for increasing revenue. When the Government sets the policies, they should also consider the challenges of hospital management including the social responsibilities and professional development needs of hospital staff, not only the economic benefits. (president)

One of the biggest problems is how the hospital sector fits into the market economy. The medical care system in our country looks like a four-unlike monster[21]*. Is the hospital a profit-making enterprise or is it a government funded unit? The government only gives us 30% of the salary bill each year, the rest we have to find on our own. And beyond salaries we also need to find funds for equipment and welfare provision (the housing and medical care to staff) and payment of bonuses. The job of managers is much harder because the system problems have not been resolved, in particular, the choice between the welfare and the profit-making roles of the hospital. (vice president)*

Accountability requirements

There were criticisms in the questionnaire returns and in the interviews over the arrangements which presently mediate the accountability of the hospitals to the PHB and other government bodies (in the responses to both the question about management frustrations[22] and about priority reforms[23]). Fourteen percent of respondents to the

21. Chinese figure of speech signifying a creature that is 'neither fish nor fowl'.

22. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *accountability requirements* are exemplified by: 'there are so many formal requirements to meet, particularly in relation to standards of medical record documentation which are required by the Health Bureau'; 'we have a lot of paper work about hospital rules and regulations but just for meeting the inspection of the Health Bureau'; 'many hospital staff are busy in sanitary cleaning checks for the better appearance of the hospital and department to meet the requirements'; 'the hospital is lacking meaningful measures of quality and efficiency but has too many formal requirements from the government.'

23. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *accountability requirements* are exemplified by: 'hospital management should aim at improved quality of care rather than formalism'; 'the government needs to consider the reform of the hospital

questionnaire survey and 15% of interviewees cited accountability requirements as one of the main problem areas (see Table 8.1 and Table 8.2). Ten percent of survey respondents and 15% of interviewees cited issues in accountability requirements as issues calling for reform (see Table 8.3 and Table 8.4.)

The most common complaint was about the hospital inspections carried out under the Provincial accreditation requirements. These inspections are widely seen as over-emphasising 'structural' indicators which are visible; that is, aspects which can be visualised by visiting inspectors (cleanliness and the quality of the medical record in particular) as opposed to less visible 'process' and 'outcome' issues (such as those which reflect upon efficiency and quality).

According to the respondents, hospital work should focus on improved quality of care and improved efficiency but these are not picked up by periodic inspections which look mainly at structural indicators and rely on fixed standards. Because of the emphasis placed on tours of inspection by Provincial officials this approach to quality assurance tends to be followed also by the leadership within hospitals. This was also criticised by respondents who argued that inspection and scoring by hospital superiors only focus on appearance rather than meaningful measures of hospital quality and efficiency. Hospital staff spend considerable time doing things just in order to meet the requirements of those inspections:

> *I think the best way of appraisal is to get feedback from patients rather than inspection and scoring by superiors. To deal with these so-called inspections and checks, our hospital only prepares a transiently better look. So they do not solve our real problems. (Party secretary)*

> *We have to do all the things to meet the PHB's requirements for hospital accreditation (Level A in tertiary hospitals). We are required to meet prescribed standards and establish essential regulations. Otherwise we get low scores. I think management should aim at practical effects instead of this undue focus on formal requirements. (vice president)*

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accreditation policy and have more meaningful accountability requirements for the hospital instead of formalism'; 'some objective measurements should be set up to evaluate hospital's quality of care and efficiency by both Health Bureau and hospital themselves instead of doing things just for meeting the requirement of inspection.'

There are so many formalities to attend to, mainly correcting the patients' records. These corrections waste so much time. Hospital accreditation sets up a prescribed format for how patient records should be written. It is boring and redundant. One physician usually spends at several hours everyday on the patient records. In addition to this, I have to correct and edit what they wrote and they sign it which takes usually at least two hours every day. (departmental head)

The present medical service management framework in our country puts heavy workloads on doctors. Doctors, for example, have to spend a lot of time writing patients' medical records, in accordance with very rigid requirements prescribed by the State and PHBx. This is too meticulous and leaves doctors little time for reading. One can see very few people in the hospital library. Doctors lack time and conditions for research projects. (departmental head)

A hospital's medical quality is shown by their patients' cure rate, rescue success rates of critical patients, whether new approaches can be applied or not and to what extent can they be applied successfully. Unfortunately we now focus mainly on things like sanitary cleaning checks and medical record writing in order to prepare for inspections. (general administrator)

Purchasing of equipment and medicines

The purchasing of equipment and medicine were mentioned by 11% of survey respondents as one of the problem areas they are facing in their present positions[24]. Thirteen percent of respondents nominated this problem area as one of the management areas in need of reform[25] (see Table 8.1 and Table 8.3.)

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24. The kinds of responses to Q17 (frustration and difficulties in managerial position) which were coded as *purchasing of equipment and medicine* are exemplified by: 'government policy in purchasing of medicine has many problems'; 'the frequency with which commissions are paid is related to the government managerial system'; 'the government has a strict control over the fees charged for medical service but not the price of medical equipment and other materials. This influences the hospital revenue and individual income so that it is impossible for the hospital and the individual not to consider the economic benefits.'

25. The kinds of responses to Q15 (areas needing managerial reform) which were coded as *purchasing of equipment and medicine* are exemplified by: 'the price system of medical services should be reformed'; 'the problem of commission payment to medical staff has affected the

The two main issues mentioned by the managers were first, distortions arising from the fact that some prices have been deregulated while others remain tightly controlled and, second, the payment of commissions in their hospitals.

Incomplete price deregulation

Many managers commented that prior to the economic reforms the Chinese health care system had been dominated by centralised price-setting associated with the State planning system. The hospital was regarded primarily as a social welfare and charitable unit. The fees to be charged for medical services were set by the government, strongly influenced by the need to reduce cost barriers to the use of services.

Prior to the market reforms user charges were kept low in order to reduce barriers to access; since hospital funding was not dependent on user charges the low fee levels did not constrain the hospital's operations. In the context of moving to a market system user charges are an increasingly important source of hospital revenue and the fact that they are kept artificially low is a serious constraint over hospital operations (including the effects on low staff salaries). Artificially low fee levels may actually encourage over-servicing where middle income patients for whom the fees do not represent a significant barrier interact with hospital staff who are under an incentive to increase volume in order to increase revenue. Yet, while the logic of maintaining access for poor people remains the government is reluctant to raise fees to levels sufficiently to deter unnecessary use nor provide for adequate income to the hospitals.

The situation is more complicated because, in the present stage of the reforms, pharmaceutical and medical equipment supply companies are free to decide the price of many of their products according to the costs of production and market demands.

Managers complained of the distortions which arise from the fact that the prices of supplies and equipment have been deregulated whilst fee levels remain tightly controlled. In areas like the purchase of equipment, hospitals are working in a market

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occupational morality of the medical personnel'; 'the government should have a good policy to consider all aspects of the purchasing of medicine, including the role of the medical companies and pharmaceutical manufacturers.'

economy, but in so far as the setting of fees is concerned they are working in a planned economy. The fee levels set by the Provincial Government have not changed for between seven and 10 years. Under this mixed system, the setting of the fee for an X-ray check does not take into consideration the increasing costs of film; the setting of fees for laboratory tests ignores rises in the price of test regeants; the setting of room (bed) charges does not accommodate the rising prices of water, electricity, power and fabric. The hospitals, however, buy medical equipment and medicines in a market economy and the market prices of materials, medicine and equipment have increased dramatically in recent years, especially new medicines.

The hospitals are caught between policies which intent on moving from a planned economy to a market economy and policies which stipulate that hospitals are welfare organisations and are not allowed to set their own fees.

The disjunctions between the planned economy and the market economy and the distortions they produce in hospital operations are nowhere more evident than in the buying and selling of pharmaceuticals.

Apart from the Government grant the two main sources of hospital revenue are: fees for services (outpatient consultations, tests, operations and bed day charges, etc) and revenue from the sale of medicines. Estimates provided by managers of expenditure on pharmaceuticals varied from 40% to 55% of total hospital expenditure. This is consistent with published estimates of expenditure on pharmaceuticals in other provinces of China (Bai and Dai, 1996; Shang and Zhou, 1996; Zhu, 1994; S. Liu, Wen, and D. Liu 1996, p. 936). It is likely that the hospital markup on wholesale prices varies across different hospitals and for different drugs but estimates provided by managers varied from 15-30%. However, the markup may be higher for many of the more expensive drugs (some of them in excess of 100%). These estimates are consistent with the research conducted in other Chinese hospitals (H. Chen and Wang, 1997; Bai and Dai). In a situation of declining Government grants and tightly constrained charges for medical services there is a strong pressure on hospitals and departments to encourage the sale of pharmaceuticals in order to increase revenue.

Managers from one of the hospitals emphasised that the fees for medical services are very low, but since the retail prices they are allowed to charge for medicines are not

so tightly controlled, the hospital is able to generate considerable revenue from the sale of drugs. At present, they estimate, 60% to 70% of the hospital's gross revenue comes from the sale of medicines (but the net income of drug sale is not high in these hospitals. See discussion on page 128-129).

Several managers also argued that the wholesale prices which the hospital pays for pharmaceuticals are unnecessarily high, which they attribute to the complexities of the pharmaceutical industry in China (in fact, the wholesale price of drugs is cheap but a very high payment for commissions. More discussion see conclusion below). Two managers stated that the price of ampicillin at the factory gate is 50RMB but this rises to 160RMB by the time it reaches the hospital. The managers argued that if the hospitals were allowed to procure medicines directly from pharmaceutical factories the prices paid by the hospitals and their patients could both be reduced. If the whosale prices were lower there might be scope for the hospitals to actually increase the retail margin and perhaps increase their own profits.

In a second hospital, the revenue from the sale of medicines was estimated to be three times the total revenue from the charges for medical services. The hospital leadership recognises the desirability of controlling the use of medicines but it is also under pressure to increase revenue to replace the decreasing contribution from government funds. Managers linked the high cost of medicine to the low fee levels for medical services as well as the high wholesale cost and inducements in the form of commissions.

> *The medicines market in our country is in chaos. The quality of many pharmaceuticals is suspect. The cost of new pharmaceuticals is very high and they are not always being used properly. The high cost of medicines is not the hospital's fault, because the hospital buys medicines at high costs, so we have to set expensive prices. The service fee of the hospital is quite low. (vice president)*

As a consequence of these distortions the use of pharmaceuticals and the cost to patients and hospitals are rising rapidly; hospitals face low revenue from the provision of medical services and face a demoralised medical workforce. These distortions arise

indirectly out of national policies; policies regarding the fee levels for medical services as well as policies affecting the sale of pharmaceuticals.

Widespread payment of commission

Many hospital managers spoke about the problem of widespread payment of commissions. Managers stated that the payment of commissions needs to be understood, at one level, as a problem of medical ethics but, at another level, as a policy problem, a consequence of economic pressures on staff and departments.

The factors which contribute to the widespread payment of commissions include:

- low salaries (creates a large group of staff who are vulnerable to offers of commissions);
- commercial organisations with funds to spare and aggressive marketing approaches;
- pressure on departmental managers to generate increased proportion of total revenue.

The ways in which these factors interact may vary somewhat in different areas. In the pharmaceutical field, managers told of pharmaceutical sales persons paying commissions to encourage doctors to prescribe the more expensive drugs. Since, under the CMRS the department budget will also benefit from increased drug sales, it appears that departmental managers are sometimes willing to see this practice continue.

> *Some doctors get high commissions from prescribing expensive medicines to patients. This is a nation-wide problem, which can only be solved when the whole social environment is changed. (departmental head)*

A similar situation appears in relation to commissions paid to doctors to refer patients (who can pay) to private hospitals. In departments where there are long queues and waiting lists, managers may be willing to see some patients being diverted to the private sector.

Commissions paid by equipment manufacturers are likely to go directly to the departmental managers who recommend the purchase to the hospital leadership. In this case it may be that the departmental manager is encouraged (through the payment

of commissions) to exaggerate the revenue to be earned from the new set of investigations and perhaps down play the cost of borrowing to pay the capital cost.

Many senior managers indicated that they recognise the seriousness of the problem of commissions and spoke of ethics education programs directed at staff members. (See Chapter Six.) However, the payment of commissions is a system problem which will need attention to staff salaries, hospital funding, and aggressive marketing practices by commercial organisations as well as the general level of ethical consciousness among the staff.

Increasing competition by private clinics and other public hospital

Seven percent of survey respondents indicated that hospitals are facing increasing competition by private clinics and other public hospitals (see Table 8.1).

This may be contributing to improvements in service amenity, particularly at the upper end of the market, but most managers who mentioned this issue expressed concern about the unhealthy effects of increasing competition, in particular the barriers to the efficient allocation of resources.

The factors which appear to underlie the effects of increasing competition include:

- policy liberalisation of the health care market-place, allowing a private market to be developed (including private hospitals and private clinics where doctors exercise the rights of private practice);
- pressure on public hospitals to generate increasing proportions of total revenue from user charges leading to a focus on attracting patients who can pay by developing 'special services' (wards and services designed for more affluent patients);
- income maldistribution in the population generally with severely skewed purchasing capacity; a small stratum of increasingly rich people and a large number of poor people who cannot pay for expensive services and who sometimes leave behind big debts (a problem of lack of health insurance);
- increasing demand from the more affluent sector of the market for access to the best specialists, for comfortable facilities and to avoid long waiting times;
- benefits associated with higher levels of hospital accreditation including a higher proportion of government funding and increased latitude with respect to fee

setting; this encourages hospitals to develop various special departments and procure large scale equipment in order to achieve higher accreditation status.

The increasing pressure of competition can be expected to have effects in relation to quality of care, including access; on productive efficiency and productivity; and on allocative efficiency.

The present research has not collected data which would reflect upon access. Clearly those who can afford it are getting access to more comfortable facilities and perhaps avoiding long waits. In so far as they get access to some of the most senior medical staff it can be presumed that they are getting better care. However, there are grounds for concern that they may also be exposed to overservicing which may have negative effects in terms of quality.

This research has not collected sufficient data for definite conclusions about the impact of the competitive environment on productive efficiency. However, there are grounds for concern about widespread overservicing which would reflect technical inefficiency rather than the reverse.

Allocative efficiency

Many managers expressed concern about the negative impact of competition on the efficient allocation of resources including capital resources, scarce skilled human resources and financial resources.

Some managers stated that because of the health system reforms, private practice and some special services are allowed by the government and there have appeared various private hospitals and clinics, and the public hospitals have to extend their services and upgrade their organisational levels competitively. As a result, competition is severe between hospitals. Hospitals are vying with each other in purchasing expensive equipment.

Several managers from one of the hospitals spoke about duplication of expensive services as a consequence of increased competition. This hospital has a well recognised liver cancer institute and its general surgery department is recognised across the Province for its expertise in liver and gall bladder surgery. Managers from both of these areas spoke about moves at another public hospital to compete in these areas;

this other hospital has recently opened a liver cancer centre (with support from the government) and has purchased expensive new equipment and is advertising its capacity in relation to liver and biliary surgery.

Several managers from a specialist cancer hospital stated that the government has stipulated that the health insurance coverage for cancer treatment will not attract a cap nor a co-payment (for patients who are insured through employment in the government sector or in state-owned enterprises). For other illnesses there are restrictions on the insurance reimbursement available to cover the cost of medical treatment. As a consequence it is more profitable to treat cancer patients and hospitals are competing to attract cancer patients.

Many of the managers argue that the way in which competition is developing presents serious barriers to the efficient allocation of resources.

Conclusions

The research reported in this thesis was based on a model which conceived the domain of 'organisational performance' as determined through an interaction between managerial competencies' and the 'administrative and policy environment'. 'Patterns of management practice' is conceived as the domain where these two influences interact.

The survey and interview results reported in this chapter concern the wider policy and administrative environment which shapes managers' practice and the outcomes achieved among the three hospitals including in this study. Four aspects of the policy environment of hospital management - hospital financial policies, government personnel policies, pricing policies, and decentralisation of hospital autonomy emerge as the major factors which affect patterns of management practice and organisational performance in these hospitals.

Problems of hospital financing policies and inequitable distribution of health resources

Increasing reliance on user charges encourages competition for the more affluent patients

Since the early 1980s hospitals have been increasingly dependent on revenue raised directly from patients by user charges. The role of government funding has been reduced from full budgetary support to partial budgetary support. Government believes that hospitals should rely on user fees to finance their recurrent costs and that increasing competition among health care providers would in turn improve the quality of services and operational efficiency (Y. Liu et al., 1995).

Findings from this research confirm that revenue from user charges has become the major source of hospital income and hospitals have been encouraged to find various ways to generate revenue to support their routine operations, staff welfare and development. This is consistent with many recent studies conducted around the country. The proportion of government funding to the total hospital revenue nationally decreased from 30% in 1980 to 9.7% in 1995. The average hospital revenue from user charges increased four times from 1980 to 1987; from 57% of the total revenue in 1980 to 74% in 1987 (S. Liu et al., 1996, p. 952; Z. Chen and Wu 1997).

However, the consequence of the increasing role of user-pays financing is the increased pressure of competition between hospitals. With the pressure to raise revenue and increased hospital autonomy there is a strong financial incentive on hospitals to orient their services and marketing to attracting the customers who are able to pay for the top specialists and for comfortable wards and who will pay to jump the queues. There is evidence that hospitals have been encouraged to provide more services to the insured[26]. Several studies show that the average length of stay of the insured was as much as 1.6 times that of the uninsured; expenditures on drugs for the

26. The urban residents benefit from compulsory, state-subsidised health insurance: Government employees are covered by the Government Employment Health Insurance; state-owned enterprise employees and their dependants are insured by the Labor Health Insurance. Since the collapse of the rural Cooperative Insurance System the great majority of rural people have no insurance and obtain their health service on a fee for service basis (for details see Chapter 2).

insured were as much as 3.5 times that of the uninsured (Zhou, 1989; Xiang, 1988; Xu, 1990).

User charges constitute a barrier to utilisation by poorer people and creates the problem of bad debts for hospitals

With the collapse of the rural Cooperative Insurance System, the great majority of rural people obtain their health services on a fee for service basis. The increased role of user charges has become a major barrier to access for poor people. Many studies of rural health care financing have shown that relatively high medical costs are constraining medical service utilisation, especially among the poor (World Bank, 1988; Gu et al., 1993; Y. Liu et al., 1995; Zheng and Hillier, 1995). As Peng Peiyun, the State Councillor, pointed out at the National Health Congress in 1996 (1997), 73% of patients in the poor areas do not have access to outpatient care, 89% of patients who should be in hospital are unable to afford the fees so they cannot be hospitalised, and 5.5% of families have had to sell their properties in order to pay their medical bills. In fact, high user charges have also increased the burden on the state, work units and individuals. Some state-owned enterprises are facing financial crises of their own and they are unable to pay their employees' health insurance. For instance in 1995, the enterprises in Shanghai were in arrears with the medical fees for their employees for 308 million RMB which involved 385,000 employees and some workers could not even enjoy basic health cover (Y. Chen et al., 1997).

Acquisition of high technology equipment encouraged; perhaps also overservicing

There are also some contradictions within government funding policies. Although the government investment in hospitals declined yearly, health officials appear to regard high technology equipment rather than personnel or other basic conditions as their main priority. This research and some other studies found that large hospitals still acquire funds from the government for purchasing expensive equipment (Fang, Xu and Liu, 1997; Liu and Hsiao, 1995). In circumstances where capital costs are subsidised and fee levels (for high technology services) are only loosely controlled, charges for equipment use lead to rapid profits at relatively low recurrent cost. Hospital accreditation also places a strong emphasis on high technology equipment and

services as its main criteria, rather than having better indicators of hospital performance. In this environment there is increasing competition between hospitals and they are encouraged to focus on the establishment of special departments and purchasing expensive equipment without full consideration of efficiency, effectiveness and appropriate use of resources. It was reported that in a city with 2,000,000 population there are more than 20 CT machines, a municipality with a population of 10,000,000 has 63 CT machines and 11 MRI (S. Li et al., 1997; D. Li, 1997). The number of CT machine in China has increased from 30 in 1986 to 1,300 in 1993 (Fang et al., 1997) and China is the biggest market in the world for CT machine (Brand 1998).

Competition among the city hospitals, neglect of township and district level hospitals and collapse of the three tier referral system encourages consumers to bypass and further weaken local hospitals

In contrast with the investment in high technology in the cities, the budgets for rural hospitals are too low to allow satisfactory development of services (Zheng and Hillier, 1995). The government has reduced its financial support for the recurrent costs of hospitals and clinics in rural areas, especially the ones operated by collectives and local communities. This results in a decline in the number of village health posts and reduction in staff and beds of middle-level facilities (Y. Liu et al., 1995; Croll, 1994). Peng (1997) pointed out:

> Service facilities and capabilities of county hospitals are very poor, for instance, their surgery capacities are not as good as half of the average level of other county hospitals in the country. Most of town clinics' houses are broken and poorly equipped. More than half of the villages have no clinics and some even have no self-employed doctors. The shortage of medical personnel especially tertiary-level ones is very serious in those county hospitals as well as township health centres.

It is a limitation of this study that I can comment on the developed pressures in city hospitals but have not looked at rural areas. The inequitable allocation of health resources may exacerbate the existing access problem. More studies are needed in this area.

Continuing centralised control over personnel policy and practice

Lack of control by local managers over recruitment, promotion and separation affects quality of staff and distribution of staff and is a source of inefficiency and unnecessary staff costs

Findings from this study suggest that the central control of recruitment and dismissal of staff stands in sharp contrast to the general policy of decentralisation of control and increased autonomy at the hospital level. People are still promoted according to seniority and connections (*guanxi*) rather than merit, the fixed staff still enjoy the 'iron rice bowl' advantage and it affects quality of staff. Pressure for hospitals to take new personnel (especially from PLA) regardless of their expertise means that many of them have to be appointed as administrators and, in quota situations, this reduces the scope for employing more clinicians.

Managers emphasised that personnel management including the size of staff establishments, recruitment and dismissal is one of the most important areas in which they would like additional freedom. Since 1979 decentralisation in the State owned enterprises and the development of joint ventures with western companies have given organisations increasing freedom to fully control their human resources. Enterprise managers have the right to appoint or dismiss workers and cadres under him/her. They could concentrate on identifying personnel needs and seeking suitable people for positions concerned (Warner, 1993; Verma, Yan, and Chen, 1995). The recent 15th Congress of the CPC endorsed further developments in this area in a move to 'market socialism' (Jiang, 1997). At the present time these far reaching reforms do not include the health industry.

The lack of control by managers over recruitment and dismissal is a major source of inefficiency in hospitals and increases the need for fee revenue to pay salaries for more staff than are probably needed. Meanwhile it becomes even more important to keep staff salaries low because the total number of staff are probably in excess of what would be needed. This is consistent with studies conducted in state-owned enterprises in China (Verma et al., 1995). There is an argument that this in turn increased the low productivity and low morale of management and staff (Warner, 1993; Verma et al).

Clearly it makes sense not to allow hospitals to have control over their own personnel functions if that would lead to serious and on-going unemployment. However, the costs of this policy in terms of managers' daily frustrations are also severe.

The limitation, on managers' authority, in relation to personnel decision-making may have some bearing upon the widespread personnel administration. On the one hand, hospital managers expressed a concern about the use of *guanxi* by the higher authorities and senior managers in determining appointments and other transactions of personnel which undermines the credibility of formal systems and distorts the allocation of resources according to economic or strategic criteria (Child, 1994, p. 32). On the other hand, managers themselves also use *guanxi* in their own practice. It could be argued that in the circumstances where managers lack basic managerial powers and meaningful accountability for outcomes, *guanxi* appears to play a particularly significant role. Consequently the quality of staff is affected.

Low salaries and the heavy use of the bonus system creates a strong motivation on all staff to focus on revenue generation

China has adopted and still supports a low salary and high welfare system (Verma et al., 1995). At present, salary levels are still very low. For instance, the monthly pay for a physician with the title of doctor-in-charge is slightly over 400RMB (US$32). From the beginning of the reforms, a bonus system was instituted as part of staff members' incomes. Particularly following the implementation of CMRS, the relationships (involving authority, accountability and benefits) between the state, hospital and staff members are set out. The degree of motivation thereby produced is impressive. The introduction of the bonus system to a great extent has achieved the purpose of rewarding the good and diligent and punishing the lax and unproductive.

Yet, the bonus system has led to a situation where nearly every staff member receives a high bonus, which then actually becomes a solid part of his/her salary and in some cases is even higher than their basic salary. This places further pressure on hospitals and staff to increase revenue (since the bonuses staff receive depend upon the revenue they and their colleagues generate for the hospital). This has created a situation where employees are very concerned with their bonus and the hospital and

departmental managers depend upon bonus payments to stimulate staff's work motivation. Furthermore, low salaries and the bonus system create incentives for clinical staff to overservice in revenue earning areas and to accept commissions. This has had a negative impact on the efficiency of service delivery.

Hospital pricing system: problems and challenges

Unbalanced price signals (medical fees priced below the cost of production but drug prices and fees for high technology services priced above the cost of production) encourage over-prescribing and over-investigation but skimping on basic medical services

In China pricing policies with respect to the fees charged by hospitals are perverse. Managers are under strong incentives to encourage over prescribing of drugs and over use of high tech investigations while skimping on the provision of basic medical services.

Under the market economy, the government still has a major role in regulating market operations and enforcing such regulating. Price bureaux have kept fees for routine medical services low in order to minimise financial barriers to care (Bloom and Gu, 1997). The standard fee charge is only one third of the cost. For instance, the fee for doctor consultation has not been changed for 40 years (since 1955) and it is lower than the cost by between five and nine times; and the cost of bed charge in university hospitals and provincial hospitals is 37RMB per day but the fee charge is only 3RMB (US$0.37) which is eight percent of the cost; the cost of appendicitis surgery is 520RMB, the fee charge is 32RMB which is six percent of the cost only (Official Investigatory Group, 1990). In fact, in recent years the prices of medical materials have increased dramatically in the market (the average rate of increase was around 30% every year), but the prices of medical services are strictly controlled by the government and have not been adjusted for years.

However, in 1985, the government announced that the fee levels charged for medical diagnosis using high technique equipment could be set according to their cost. In fact, fee levels for some high technology items like CT scans, MRI and ultrasound may be based on incorrect data provided to regulatory bureaux, including

underestimates of the life of equipment and underestimates of volume of tests leading to permission to set the fees at unreasonably high levels (S. Li et al., 1997). Such latitude with respect to prices added to the incentive for hospitals to use high technology equipment frequently and to acquire new and expensive equipment.

Another incentive created by the pricing system is for hospitals to sell more pharmaceuticals. Prior to the 1980s, there was only one channel for pharmaceutical procurement: the flow channel of medicines was from the public wholesale units (provincial, city or county pharmaceutical companies) to hospitals. The price was fixed and the quality of drugs was assured. Under the economic transition, the drug market is booming. The number of pharmaceutical factories and wholesale units has increased, many individuals and collective units are also engaged in drug wholesaling to make money (Hu, 1996b). Hospitals can buy their medicines from whatever sources they like. The official retail prices are calculated on the basis of the official mark up applied to the official factory gate prices (about 15%). However, the drug manufacturers can produce the drugs considerably more cheaply than the official factory gate prices[27]. This leads to bigger margins for profit. H. Chen and Wang (1997), estimated at up to 30-100%, and for some drugs even reaches to 200% or more. The wholesalers can then sell drugs to the hospitals at lower than the official wholesale price whilst at the same time paying commissions to the clinicians to encourage them to prescribe.

Since the fees for medical services are very low, hospitals have a clear incentive to over-prescribe drugs for generating revenue. More recent studies have found that many hospitals purchase more and more expensive and imported medicines, and encourage doctors to extend the scope of using medicines and to use expensive medicines. The average cost of drugs per visit has increased considerably since the early 1980s. Most prescriptions are for several drugs and frequently include antibiotics and/or an injection. Some prescriptions are even for over ten drugs and with total costs over one thousand RMB (*da chufang*) (Yu, 1992; Zhan, Tang, and Guo, 1997).

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27. The government has not developed a good pricing system which could follow up the market changes. The actual wholesale prices of medicines usually are lower than the standard price set by the government (because of the lower cost); some standard prices have been set for years and never been changed; many health department do not have the necessary sources and expertise to monitor helath service performance and they often lack personnel with health management skills. Therefore, there is an insufficient investigation into the market before the standards are set (H. Chen and Wang, 1997).

Low salaries and high margins on drug sales encourages payment of commissions

Meanwhile, with a low base pay for doctors, the surplus earned through the sale of drugs is becoming an important source of their income. That means that the more medicines they used the more benefits they could gain. It causes the problem of widespread payment of commissions and it corrupts the morals of medical staff, discredits professional ethics, and results in unfair competition and conflict among staff members.

The underpricing of medical services is clearly a policy decision designed to remove financial barriers to obtain health care. However, weakness in the price setting mechanisms have allowed drugs and high tech equipment to escape these restraints.

Market forces in China are not working well in health care. Government policies on hospital financing and medical pricing are inadequate and are major factors in shaping patterns of management practice. They create incentives for inefficiency and waste. Policy-makers need to develop strategies to combine the market and planning functions to address these issues. Unless some mechanisms can be established to work on both the market-oriented reform and the change of hospital behaviour, the present trend towards cost increases in health care will continue.

Management autonomy

The state and Party introduced and have supported the CMRS and the PRS. These policies reflected a judgement that hospitals in China were too centrally controlled and that there were difficulties deriving from the traditional dual hierarchy including the hospital management hierarchy and the Party organisation in the hospital. The CMRS and PRS are policies which were deliberately framed to solve these problems. The former was designed to increase the autonomy of hospital managers in relation to government bureaux. The latter was designed to establish new rules governing the relationship between hospital executives and Party officials.

The evidence presented in this study suggests that hospital managers were given additional autonomy to make decisions on hospital operations under CMRS and in some degree this increased autonomy has been real and beneficial in terms of allowing managers to move to more efficient ways of producing hospital services.

Conflicting accountability and partial devolution interferes with decision-making

There is widespread agreement that the realisation of the objectives of the CMRS has been limited by a number of important factors. The continued problem of two channels of accountability (the KMC and the PHB) and multiple government bureaux (Health, Personnel, Finance, and Science and Technology) is allied with authority and expectations that the structure of the hospital will correspond to that of the administrative bodies. Obviously, this conflicting accountability pathway constrains the ability of managers to exercise strategic leadership in a consistent way with continuing tight centralised control over personnel, including salaries and recruitment, and over medical services and bed day fees. The lack of managerial authority makes it more difficult for managers to discipline staff and ensure patterns of clinical practice which lead to quality and efficiency. The policy objective of increased management autonomy conflicts with the policy objectives of maintaining employment levels and ensuring access to medical care for the poor. However, while the market incentives are so perverse (for example, encouraging over prescribing and over investment in high technology facilities) there may be grounds for the government's reluctance to allow hospitals more autonomy.

Role of Party secretary still a problem

Under the PRS the role of the Party is to guarantee and supervise the implementation of Party and state policy and to support managerial leadership. In this study, managers did not cite any evidence that the implementation of the PRS has produced benefits to hospital management. On the contrary they reported that there is still considerable conflict between hospital executives and Party officials. Senior managers in the three hospitals indicated that the Party secretary had considerable power though not responsibility. Presidents indicated that they consult with Party secretaries before making any decisions on major management issues in the hospitals.

The influence of the Party secretary may be explained by three factors. First, most Party secretaries in hospitals are physicians and the technical expertise which they possess helps them in developing relations with medical staff and in suggesting solutions to managerial problems. Second, Party secretaries have previously held senior positions through which they appointed a considerable number of the hospital's

tenured middle managers. They thereby gain legitimate power from the support of an important managerial constituency (Child, 1994, p. 80). Finally, personal support from the supervisory bureaux and medical university provides the Party secretary with additional legitimacy and potential for exerting influence.

However, the PRS policy emphasis on the changed role of the Party amounted to a rationalisation of its function rather than producing a reduction of its powers (Child, 1994, p. 83). It casts doubt on the notion that sharp boundaries could ever have been drawn between 'day-to-day hospital management' and 'overall monitoring and supervision of hospital performance' in the light of central policy intentions. The Party secretary still retains a significant degree of influence within the management decision-making process. The political role assigned to the Party is not working as well as might be hoped and this makes it difficult to transfer managerial responsibility to hospital executives under the PRS. The continuing tensions between executives and Party officials create a further constraint on the capacity of managers to fulfil their responsibilities.

New policy in health

During the period of this study, the Central Committee of the Party and the State Council convened the National Health Congress in December 1996 (which was the first health congress held by the Central Committee of the Party and the State Council since 1949) and issued an official document entitled 'Resolution on Health Reform and Development' in January 1997 (The Central Committee of the Party and the State Council, 1997). The issues of an imperfect health insurance system, insufficient government funds for the health sector, unreasonable medical resources allocation, and the rapid increase of the cost of medical care were raised.

Furthermore, the government has announced its intention to increase the budgetary allocation for health, support upgrading of facilities based on regional health planning, improve the health insurance systems in urban areas, re-establish the cooperative health financing system in rural areas, extend management autonomy in the health sector, deepen the reforms of personnel and distribution systems, adjust the composition of hospital revenue, reduce the proportion of revenue from the sale of

pharmaceuticals, and control the increasing costs of medical care amongst other objectives.

These policies would achieve a major reform of the health care industry in China but the debate now is on how to implement these policies. As Child (1994, p. 86) has argued the links between the articulation of policies and their realisation can be somewhat tenuous and long drawn out. The announcement of official policy can precede the issuing of detailed regulations by several years and, even then, the policy may not have been formalised in its entirety.

Chapter Nine

CONCLUSIONS

I started this research with the long term goal of contributing to the development of management education in the expectation that this might lead to improved hospital performance. I started with three broad hypotheses: that there are shortfalls in current levels of hospital performance; that these shortfalls are at least partly due to a lack of management knowledge and skill among hospital managers; and that these weaknesses in management competence could be remedied through formal training.

Would formal management training lead to improvements in hospital performance?

I have demonstrated that there are significant shortfalls in organisational performance in the hospitals which participated in this study. These shortfalls are at least partly due to a lack of management expertise. There is clearly a need for management training, at least in these three hospitals.

However, these conclusions do not assist in determining *what sort of management training might be needed.* Management training needs to respond to the specific challenges which Chinese hospital managers are facing. These in turn reflect the particular circumstances of Chinese hospitals in this time of change; circumstances which include the pace of change, the previous lack of training and the pressures of certain perverse policy incentives. In this final chapter I bring together the conclusions which I have developed in the last five chapters in an attempt to work through the interactions between these factors and draw some conclusions about the broad aims and objectives which should drive new management training programs.

The study was undertaken in the three teaching hospitals associated with the Kunming Medical College in Kunming. Three main data sources were used, comprising a questionnaire survey of 342 managers, interviews of 20 selected managers and a review of administrative data. The data collection and analysis were organised

around the research model illustrated in Figure 9.1 which identifies five domains for data gathering and highlights some important links between these domains.

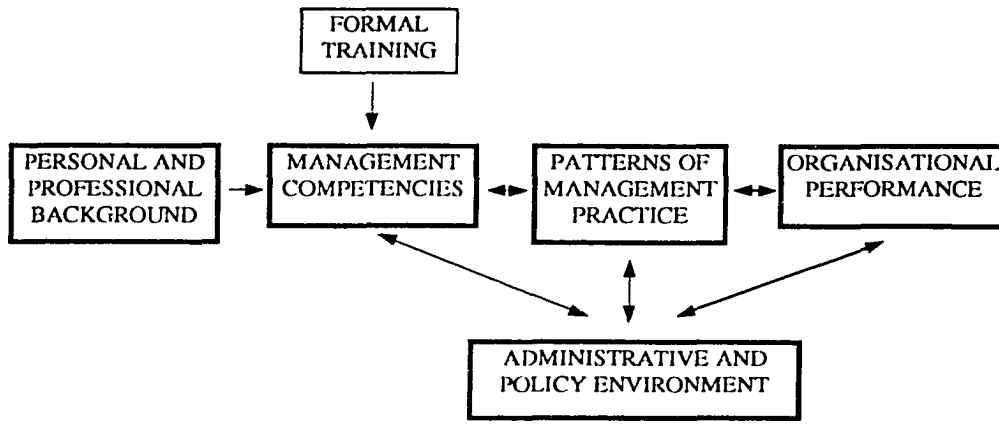

Figure 9.1 The research model

There are significant shortfalls in hospital performance

The findings of this research show that there are some shortfalls in organisational performance in the three Chinese hospitals studied. There are widespread inefficiencies in the *production* of patient care, reflected in the long average length of hospital stay, and in the *allocation* of both recurrent and capital resources, reflected in uneven staff allocations and in the acquisition and overuse of capital equipment and in the over-prescribing of pharmaceuticals.

The hospitals have all achieved increasing levels of activity in recent years and some reduction in length of stay partly due to increasing technical efficiency. However, these gains in volume are very much revenue driven and include an unknown component of overservicing. The decline in length of stay has been relatively slow in these three hospitals; indeed length of stay appears to be increasing in many other hospitals in Yunnan (Yunnan Provincial Health Bureau, 1994). It appears that the average length of stay has remained relatively high elsewhere in China and that there has been a trend to increasing length of stay in recent years around the whole country (Y. Chen et al., 1997).

Managers in this study have spoken of increasing costs, perhaps increasing faster than the increasing levels of activity. This suggests that, if such data were available, the cost per in-patient treated or cost per occupied bed day could be increasing rather than falling.

All the three hospitals are using sophisticated medical technologies at an increasing rate. Hospitals have been encouraged to purchase more expensive equipment and allowed higher charges for diagnostic tests and treatments. There is a financial incentive encouraging the hospitals to use costly technologies not always in situations of documented benefit to patients. This is consistent with studies in other parts of China, for example one county hospital where the number of patients grew by only 2.1% in 1993 but the number of high-technology services provided increased by 50% (Jin, 1995).

The hospitals in this study strongly depend on drug sales for generating revenue and the proportion of the revenue from this source has increased significantly in recent years. This is consistent with the report from the World Bank (1997) which quotes pharmaceuticals as accounting for 52% of health spending in China.

With respect to the quality of service, the findings of this study suggest that medical disputes and accidents and poor service manners (by both medical and nursing staff) are common and are increasing. However, while there is increasing interest in quality issues in Chinese hospitals, the data which are available are quite limited.

The shortfalls in hospital performance are due to lack of knowledge and skills *and* to adverse policy settings

It is clear that the shortfalls in performance are due to both a lack of management competency and to influences in the wider policy environment. There is clearly a need for management training in Chinese hospitals. But can we be more precise about the sort of competencies needed and the dynamics whereby improved competency and reform of the policy environment might interact to improve practice and thereby performance?

The ways competence and environment interact is complex and it is difficult to tease these domains apart. There are two poles of opinion. Hospital managers said

that the economic reform and the Four Modernisations require them to master management knowledge and skills. They see a need for broadly based management training to help them to cope with the problems they are facing. Some managers seem to regard management training as a 'magic wand'. However, it is also very clear that there are some large structural barriers and difficulties in the policy context which constrain management practice in the Chinese hospital system.

Managers identified as training priorities: managing people, managing resources and managing information. However, they could not provide a very clear idea of what sort of management competencies they need. Nor did they provide very strong evidence to say how the shortfalls in organisational performance are caused by lack of management competencies in these areas. Many of the managers participating in this study are quite unclear as to what management is and they lack the language to identify clearly what they need for training.

Need leadership skills *and* the authority to manage

Managers consider that managing people is very important for their job. This is not surprising given the degree to which they have to rely on inter-personal relationships and personal leadership in working with peers, subordinates and supervisors. In speaking of managing people there were strong themes of personal inspiration; of the responsibility of leaders to inspire people to do good works.

However, there are limits to the degree to which inspirational leadership can be learned and which will stop low-paid and over-worked nurses from shouting at patients. These are not just questions of better leadership skills; these are system issues with policy implications. This problem is compounded by the lack of autonomy available to managers in managing personnel. There are relatively few disciplinary levers in the hands of the manager over his or her staff. Because of centralised personnel policies managers have no power to hire and fire, and lack flexibility in setting rewards and penalties; it is not surprising that they rely on personal inspiration (personal charisma) to motivate medical and nursing staff to provide better quality of care and to increase productivity.

Managers need training in financial management *and* incentive structures which encourage good outcomes

Managers identify that managing resources is important for their jobs, especially for them to respond to changes associated with economic reform. Many managers are looking for training in financial management that will help them to cope with inadequate budgets (and the pressure from the leadership of the hospital who say departments must pay their way), pressure from members of staff who want to increase their bonus payments, and the bad debts of those who are unable to pay for services.

However, these problems must be understood as related to the changing funding arrangements, the price distortions in the health sector and the lack of an effective health insurance system. Because of pricing distortions the hospitals are in the midst of a diagnostic equipment race. The price structure for drugs includes an incentive for medical staff to overprescribe drugs and for people to accept commissions and inducements (the low salaries for hospital staff are relevant here as well). The need to generate revenue from user charges forces staff to prescribe too many pharmaceuticles and order too many tests; user charges discourage poor people from attending and when they do come they are often much sicker.

Managers need access to modern information technology *and* skills in thinking about and developing hospital information systems

Managers indicate that the management of information systems is important for their jobs and place considerable emphasis on acquiring skills in the use of computers. Thinking about health information systems, however, requires a framework and a language for thinking about how information is collected, stored, manipulated, communicated and used. It involves a way of thinking about the information flows which support particular functions rather than a set of equipment. The introduction of computers needs to be thought about in terms of hospital information systems.

Managers need a broad understanding of the principles and strategies for achieving best practice in organisational performance *and* they need incentive structures which encourage the achievement of good outcomes

Managers state that managing organisational performance is important in their practice and that they wish to improve the efficiency and quality of care of their hospitals and departments, especially under the competitive environment. Managers need to have the background knowledge to speak about problems of efficiency and to measure and evaluate them and track them down. The use of management sanctions and financial incentives to encourage staff require a capacity for managers to measure quality and establish credible performance indicators against which management sanctions shall be determined or bonus payments based.

However, there are limits to which management practices can achieve improved performance when funding relationships run counter to the objectives of the hospital system. In Chinese hospitals there is strong pressure on managers to maximise revenue and sometimes these pressures run counter to the broader efficiency objective.

Managers need to have a good knowledge of the goals and principles of government health policies *and* they need to have the skills and opportunities to participate in policy development

Managers in this study appear to regard policy primarily as government instructions. There are historical reasons for this, but even in a top down centrally controlled system, no matter how strong the top-down authority is, people at the lower levels usually have subtle ways of resisting a policy if it does not make sense to them. Managers appear to think in terms of policy as instructions to be implemented or to be subverted.

However, in the uncertainty and change of the new environment there is also a need for managers to participate in policy making as well as policy implementation. For instance, in relation to health insurance policy, hospital managers have insights about patients who can not pay their bills and the problems of bad debts, and other considerations such as cost control, equitable ways of raising funds and access to care for those who do not presently attend. Managers have a contribution to make to discussions about pricing policies arising from their experience of perverse pricing

which requires them to encourage over-servicing in revenue earning areas (including services to insured people) and to contain servicing rates in low yield areas and in providing services to uninsured people.

Hospital managers need to look closely at the system dimensions of their problems, to discover to what extent the problems managers are facing in their hospital are local and specific to their hospital and to what extent they are the local manifestations of system problems. Managers need to be involved in forecasting the future and adapting to contingencies as they arise. They need to look ahead, make sense of the directions they are moving in, and adapt to the forces of change but also participate in the dynamics which determine the shape of the change that will take place.

The training of managers must be more than simply assisting them to compensate for the adverse incentives of the present policy environment. In order to improve hospital management, managers need competencies which will help them to handle their daily challenges but also to recognise the system issues and to engage with the policy making processes. Without the strategies to deal with the policy issues, training itself can do little for organisational development.

These findings have implications for both teaching *and* policy reform

I have demonstrated that there are significant weaknesses in organisational performance in the three hospitals studied. I have demonstrated that these weaknesses can be traced to both shortfalls in competencies at the level of the individual manager and to constraints and perversities in the wider organisational and policy environment.

What is new about these findings? In what respects does this research contribute to our understanding of the management training needs (of our sample) of Chinese hospitals)?

There has been a widespread consensus in health policy circles in China for some years that many hospital managers lack some basic management competencies and that hospital managers work in an environment strongly influenced by perverse incentives. There was a consensus on the need for training and for policy reform.

The value which is added by this research is first, the detailed documentation of the interactions between management competencies (strengths and weaknesses) and the perverse policy settings and second, the insights into the dynamics of these interactions which the research reported in this thesis supports. I have shown how patterns of managers' practice (and the organisational outcomes with which these are associated) are shaped by the interactions between certain shortfalls in manager's knowledge and skills and the perverse incentives which originate in the wider policy environment.

Simply providing training in some kind of universal set of generic management competencies would be quite inappropriate unless it recognised the complexities and particularities of this environment.

Whilst there has been a consensus at a general level about the need for training and policy reform this was not an adequate basis for action. On the basis of that consensus it would have been quite reasonable to deal with these two domains of difficulty separately: (1) set up training programs, and (2) pursue policy reform. Undoubtedly these are different domains of action in many respects but it is important, in dealing with both domains, that the interactions between the two are clearly understood.

The environment of perverse incentives presents two sets of challenges to managers' practice (and therefore to any training program): first, to cope with these incentives, to work with them and past them, to deliver good outcomes despite the perverse incentives; and secondly, to contribute to the policy conversation, on the basis of their own experience and expertise, ideas for reducing the perversity of these incentives, replacing them with incentives which actually encourage excellence in organisational performance.

This understanding points to a very particular set of priorities in developing training programs, including, for example, a strong emphasis on structural and systems analysis and policy analysis so that the managers can name and speak about the perverse incentives (even while they both follow and resist those incentives) and contribute actively to the policy discussions necessary to reshape those incentives.

This understanding also highlights the contribution that hospital managers could be making to policy development, through more systematic program evaluation, innovation, and other policy relevant health services research. This is an insight which is particularly relevant to the work of the policy makers.

Training programs need to resource managers' practice at three levels

Clearly it is important to recognise the interactions between competencies and policy; between training and policy reform. However, this thesis is about the role of management training. It is not a policy thesis. I have chosen to discuss the interactions between training and policy reform from the point of view of managers' practice; not ignoring the cultural and the policy environment but by casting the policy issues as challenges for managers.

The notion that managers need to address policy issues as well as the challenges of routine management is not a familiar idea in China. There was a common tendency among the respondents in this research to over-estimate the power of the management 'technologies', the understandings, skills and strategies which they might acquire through management training. Managers are over-optimistic about the power of management technologies to overcome the constraints and perversities in which they work but they do not recognise policy participation as part of their own practice. This contradiction points towards the importance of emphasising the boundaries and interplays between routine management and policy reform.

Another 'boundary' which needs to be highlighted in planning management training is that between ethics (commonly cast in terms of 'being a good role model') and the more 'mechanical' management functions which are part of routine management practice. Particularly among Party members there is a tendency to over-state what can be achieved by 'being a good role model' and to accept relatively passively the pressures and constraints which arise in the wider policy environment.

For these reasons, in thinking through the educational implications of the findings of this research I have highlighted three levels of management practice. These are:

- the personal ethical level (being a good role model)
- being a good manager
- engaging with the forces of policy and system change

Managers face choices at each of these levels, choices which reflect different mixtures of local discretion and policy or system issues. By thinking about the choices which managers make at each of these levels and the competencies which might support such choices I have represented the policy and system issues as questions of competency and training alongside the forms of practice and ethical choices which are part of everyday management work.

Sometimes, being a good role model is just not enough

Ethical issues emerged in many of the interviews during the course of this study. One of the commonest kinds of ethical challenge arises where managers are torn between practising in a way that will benefit their hospital or department and practising in a way that will benefit society as a whole. The ways in which managers spoke of these contradictions may be paraphrased thus: I would like to direct the resources of my hospital to serving the needs of the people with the greatest needs. But if I did so the hospital would go bankrupt very quickly. I would like to reduce the over-use of medications, particularly antibiotics. It is a waste of precious resources and contributes to the rapid development of antibiotic resistance. However, if I did so the hospital would go bankrupt. I would like to see the appointment and promotion of staff on a merit basis rather than through *guanxi*. However, I have to play the relationships game myself for many reasons.

The main practical strategy that managers referred to in speaking about these ethical issues involved *being a good role model*. Many senior managers, particularly Party leaders, spoke of the importance of managers leading by example in helping the hospital to take the right path.

Nonetheless, we should beware of over-individualising the ethical dimension. When people are dealing with entrenched system issues there is only so much that ethical role models can do. Too much emphasis on the need for everybody to behave properly when everybody is forced to bow to the systematic pressures can lead to

disillusionment and cynicism both of which are not a good basis for change management.

It seems that there has been a tendency to over personalise, over individualise the kinds of problems managers face, partly because of the lack of languages to 'see' and 'make sense' of the big 'structures'. So simply giving managers those languages, frameworks for different interpretations may help them to take a more balanced approach. One of the benefits of management training is to help managers to 'see' the big picture of the system and be more reasonable about the scope for changing the system simply by being a good role model.

Sometimes, being a good manager is just not enough

The second 'level' of management practice can be thought of as simply *being a better manager*. Clearly there is a broad range of management competencies which can support management practice at this level. The Rawson checklist provides a useful summary of these competencies. However, in reflecting on the results of this study it is helpful to make a distinction between interpersonal competencies and system competencies.

The managers participating in this study gave first priority to personal skills such as leadership ability and interpersonal skills. Perhaps this is because these are competencies which these managers lack and they properly identified them as priorities for training. This may be so. It seems reasonable to assume that these competencies may help managers to do their jobs better: projecting more effective leadership to inspire staff to greater efforts in difficult circumstances; working on team-building so that the stresses of change are channelled into group creativity and not manifest in internal conflict.

However, it is also important to be able to address the system problems which make the work environment difficult and create circumstances which cause stress for staff. Another aspect of 'being a better manager' in the face of rapid and disrupting change involves being an evaluator, researcher and innovator: problem-solving: looking for weaknesses and researching causes and possible solutions; benchmarking: looking at other work sites for ideas about doing things differently and better; and

reengineering the work processes: looking at what we do and thinking through whether in changing circumstances it could or should be done differently. In each case what matters is the process of evaluating the way managers presently work; researching the underlying factors; innovating and developing new ways of working; and then evaluating all over again.

It is my impression that the respondents in this study have under-estimated the significance of these kinds of organisational strategies in *being a better manager.*

Nevertheless one should be careful not to over-state the ability of individual managers to make big changes in the ways their hospitals work through evaluation, innovation and research (especially in a system with such a strong tradition of centralised leadership). Overstating the capacity of the managers to achieve change in their own area can lead to frustration and 'burn-out' (where managers work too hard and hope too much and then lose heart).

Managers must take some responsibility for helping to solve the system problems

It is here that managers' practice needs to be thought about at the third level, of *participating in policy formation.* I have pointed out that Chinese managers tend to think about policy as 'government instructions' which are handed down to the manager and implemented (or subverted). However, there are real limits to government power and the power of instructions relayed down the management hierarchy. To what extent can problems such as medical accidents or quarrels between staff and patients in the outpatient department or inefficiency in the supply department be changed by government instructions coming down the management hierarchy? It is one thing to have government statements about the need to improve the quality of care provided in the hospitals but that does not necessarily mean that the staff in the outpatient department will suddenly change the way they are practising. It is one thing to have government statements saying that the hospitals should be more efficient but how does that affect the clerical staff in the supply department? Achieving change in complex systems depends on the participation of managers and practitioners as well as governments.

There are various avenues through which health care managers can contribute to policy-making. Hospitals and health care organisations can contribute to policy making by naming and studying the problems that they are facing in delivering health services. Hospitals face numerous problems in delivering services and are often quite vocal in telling the policy makers about their problems. Doing so in a more systematic and well documented way can make a valuable contribution to policy.

Health care managers also need places where they can get together and share their experiences, to share the results of their different evaluations, to talk about their problems (particularly those problems which are widespread), and to learn new strategies and new methods from each other. In many Western countries professional organisations play a very important role in converting the experience of individual managers into a coherent position on behalf of managers and on behalf of hospitals and then communicating with government. The key roles of these professional organisations are: providing forums for policy discussion (conference and workshops); providing journals for policy analysis, commentary and advocacy; adopting policies for recommendation to government; and communicating with government on behalf of hospital managers. In the political culture in the West such professional bodies can play a very positive role in policy making such as telling government about problems, bringing forward opinions and research about causes and possible directions, and responding to government proposals. Clearly, training programs cannot develop 'competencies' about participating in professional organisations. However, they can model these aspects of practice and work with professional organisations where they exist.

In brief, managers must be mindful of the ethical dimensions of the challenge of change and seek to provide a good role model. However, there are limits to this approach. Managers should rise to the challenge of rapid and disruptive change by being better managers, through inter-personal and system strategies. However, there are limits to this strategy also. In addition to providing better role models and being better managers, the management of change in the contemporary Chinese health care system requires that managers must also take responsibility for the system problems as well as the specific practice problems that they face in their daily work.

Six themes and six sets of objectives for hospital management training in China

I started this research with three broad hypotheses. The first was that there are shortfalls in current levels of hospital performance. The evidence gathered in this research and presented in this thesis and summarised earlier in this chapter provides strong support for this hypothesis. The second hypothesis was that these shortfalls are at least partly due to a lack of management knowledge and skill among hospital managers. The evidence presented in this thesis and discussed above provides strong support for this hypothesis also.

The third hypothesis was that these weaknesses in management competence could be remedied through formal training. I have not subjected this hypothesis to formal testing of any sort in the research presented in this thesis.

However, my colleagues and I, through the La Trobe University Kunming Medical College Joint Centre for Health Management and Health Policy Training and Research, have started to put in place a series of management training courses which will allow this hypothesis to be examined more closely in future research. The Joint Centre was opened in 1997 with support from both the Chinese and Australian Governments and completed its first course in 1998 with 70 hospital managers and health care administrators from across Yunnan Province graduating with a Graduate Certificate in Health Service Management. Most of these graduates will proceed to a Postgraduate Diploma of Health Services Management in 1999.

The curriculum for the Graduate Certificate was based on the research reported in this thesis. In the course of developing this teaching program my colleagues and I have worked through the results of this research very carefully with a view to identifying priorities for health management education.

I list the education objectives which we have drawn out of this research and which are guiding our teaching in Kunming. These objectives represent in a sense the *conclusions* of my research. They are not presented with any suggestion that they are generally applicable and ought to be adopted by everybody, everywhere. Part of good teaching is to keep on doing needs assessment and re-shaping teaching accordingly. These are the objectives which my colleagues and I have developed for one particular

course at a particular time in a particular place. Nonetheless they may be of interest to educators and policy makers in other provinces.

Six themes are designated: managing resources, managing people, managing information, managing organisational performance, managing change and managing the external environment. These themes provide the framework for an integrated and interactive approach to the content material linking theory and practice with an emphasis on skills development. The aims and objectives proposed for the six themes are as follows:

Managing resources

The broad aims of this theme are to help managers to understand and apply basic principles from health economics, accounting and business planning to health care management. The objectives which we seek to achieve in the Graduate Certificate are that graduates will: understand, and develop some skill in using, the basic concepts of health economics in relation to efficiency, priority setting and approaches to evaluation; understand the broad dimensions of health resource allocation, nationally and at the provincial level; understand the basic principles of accounting and to develop skills in reading financial statements and analysing costs; understand and develop skills in budgeting, cost control and re-allocation of resources; understand the basic principles of auditing; and understand and develop skills in business planning.

Managing people

The broad aims of this theme are to help managers to explore some of the insights, principles and approaches from the human resource management field which are of particular relevance to health care management. The objectives which we seek to achieve in the Graduate Certificate are that graduates will: identify and explore issues of human resource management and human resource planning in the Chinese health care context; identify, analyse and develop the people skills of management; and explore approaches to personnel management practices and policy issues.

Managing information

The broad aims of this theme are to help managers to understand the importance of timely access to strategic information in management, to understand the importance of developing information systems for informed management in health care organisations, and to introduce relevant computerised information systems and data bases. The objectives which we seek to achieve in the Graduate Certificate are that graduates will: review the role of information in management; identify management information needs; identify the role of management information sources and systems; and develop the knowledge and skills needed to develop management information systems that will meet management needs.

Managing organisational performance

The broad aims of this theme are to help managers to acquire resources and skills for improving organisational performance, including quality, efficiency, priority setting, productivity and access. The objectives which we seek to achieve in the Graduate Certificate are that graduates will: acquire a framework and a language for thinking systematically about continuous improvement in organisational performance; review the strengths and weaknesses of patient care in managers' own hospitals and departments and the arrangements presently in place for monitoring and improving performance; and identify priorities and strategies for strengthening the management of performance in managers' own hospitals and departments.

Managing change

The broad aims of this theme are to help managers to explore the processes involved in hospital development, reading the changing needs, technologies and policies; planning new organisations for new needs and implementing and adapting to change. The objectives which we seek to achieve in the Graduate Certificate are that graduates will: acquire a set of frameworks and a language for thinking and speaking about organisational change; and to acquire some principles, strategies and precedents to consider in embarking on organisational change work.

Managing the external environment

The broad aims of this theme are to help managers to explore the health policy context of health care management in China and avenues for managers to participate in policy making. The objectives which we seek to achieve in the Graduate Certificate are that graduates will: describe the provincial and national health care system (scale (personnel, services, facilities, funding), diversity, control, trends); locate the challenges of health care management in the context of wider models of the health system and of the conditions for health improvement; be familiar with current issues and recent directions in health policy at the national and provincial levels; be familiar with the constraints and forces which have shaped the development of the health care system in Yunnan and to be familiar with other health care systems (other provinces and other countries) in order that they serve as reference points in considering local arrangements and options; be able to describe the structures and processes through which policies are made and implemented at the national and provincial levels; develop skills in policy analysis and policy development with a focus on the policy implications of the kinds of problems confronting health care managers in their routine practice; to be familiar with strategies for policy participation at the level of the health facility manager.

These are the themes, aims and objectives which have guided the first course. The next stage will be to evaluate more closely the impact of the training provided on the management practice of the students/graduates and to learn from this experience more about the content and pedagogical issues involved in management training.

Need for more research

This research project has highlighted a number of dilemmas facing Chinese health managers: increased responsibility yet lack of autonomy in important areas; pressure to increased productivity yet declining government budget support; increased policy emphasis on revenue raising and user charges yet a requirement to provide services to poor people without insurance coverage. The system as a whole is crying out for the better management of resources. These problems demand pro-active management and intelligent entrepreneurship so that hospitals can adapt to rapidly changing

circumstances whilst improving the quality of patient care and efficiency of hospital management.

One answer to this is better training opportunities for managers. However, Education and training alone will not solve these problems; what is needed is also a close examination of what is actually happening in health institutions and the effects of health policy on their practice. This research project has gone some way in answering those questions. But it has also raised more questions that need to be investigated. Among the flood of further research topics and questions which emerge from this research are:

- management training needs (replicating the findings of this study; developing better tools for measuring organisational performance; closer study of the interplay between competence, practice and policy environment; evaluation of the training programs);
- research and development of resources for management (in particular, health information systems, applying DRGs as a measuring tool, improving coding quality);
- policy research in key areas of health care delivery (bonus payments and management practice, pharmaceutical economics and prescribing practice, use of expensive equipment, quality assurance, competition pressures, and hospital accreditation);
- policy research on health insurance in the rural and urban areas, and on access to health services.

Last words and next steps

I have looked at the Chinese hospital system and assessed management education needs through a study of three teaching hospitals in Kunming. The findings of this research have major implications for management development policies and training practice. The Chinese health care system is undergoing massive and rapid change and health care managers are facing huge challenges. Investment in management training will be critical in negotiating these changes and challenges. However, it is essential that a balance is struck between training and structural reform.

The methods and data sources used in this research impose some limits on the conclusions which can properly be drawn. I was constrained by the availability of data

including the limitation of data sources and my inability to access certain data. The lack of such data restricted me to the qualitative survey and interview approach and precluded my use of a range of alternative strategies. This restriction was not a disadvantage in the present context. I have assembled a broad ranging description of hospital management and outcomes in the three study hospitals illustrated with rich detail from the interviews and survey forms. This provides the basis for an interpretive analysis of the dynamics through which patterns of management are determined, looking particularly at the interplay of managers' competencies and the constraints of the wider organisational and policy environment.

However, a balanced program of research in this field needs to use a range of methodologies. The broad descriptive picture produced in the present project provides the foundation for further research including more quantitative and comparative methods.

This study is restricted to the hospitals within the KMC system. The results cannot be generalised to the entire population of hospital managers in China. Nonetheless, these hospitals have some characteristics that are common with the whole Chinese hospital system. Thus, the results should be of interest to other hospitals within Yunnan Province and hospitals in other provinces. Further researches could include a range of samples across the country and generate more representative findings.

Chinese health planners face massive health policy challenges and huge uncertainties surrounding the most appropriate policy choices. In such circumstances there is a critical need for good relevant research. China does not have a strong tradition of health services and health policy research. There is a need for capacity-building in this respect.

Appendix A

QUESTIONNAIRE OF MANAGEMENT TRAINING NEEDS FOR HOSPITAL MANAGERS

Introduction

This questionnaire survey is part of a development project directed at strengthening hospital management training in Kunming. Through this project we hope to identify the most pressing needs in the field of hospital management training and the most appropriate ways of addressing these needs.

This project is being conducted within the Kunming Medical College in collaboration with experts in hospital management training from La Trobe University in Australia.

As a practising hospital manager we are particularly interested in your experience and your opinions on this matter.

Please take a few moments to complete the enclosed questionnaire and return it to us in the return envelope provided. You will notice that the return envelope has a number attached. This is to enable us to follow up non-respondents. The actual questionnaire returns will be analysed anonymously.

If you would like further information about this project you could ring Dr Pei Likun on 5331911 ext. 436.

Thank you for your kind cooperation.

Kunming Medical College

Please answer the questions below by ticking the number that corresponds to your response. Please ignore the small numbers in square brackets [xx] on the right side.

---

1. Sex [001]

(1) Male ___

(2) Female ___

2. Age ___ [002]

3. Highest education degree

		Year of graduation	[003] [004]
(1) Diploma	___	___	
(2) Bachelor	___	___	
(3) Post-graduate diploma	___	___	
(4) Master or higher	___	___	
(5) Other	___	___	
Please indicate	_____		[005]

4. Professional and discipline speciality [006]

(1) Medical specialist ___

(2) Pharmaceutical

(3) Medical technology

(4) Nursing ___

(5) Other ___

Please indicate _____ [007]

5. Which working unit do you work at [008]

(1) Internal medicine ___
(2) Surgery ___
(3) Pharmacy ___
(4) Paramedicine ___
(5) Administration ___
(6) Supply ___

6. Administrative position [009]

(1) President ___
(2) Vice-president ___
(3) Chief of section ___
(4) Head of department ___
(5) Other ___
Please indicate _____ [010]

7. Professional title [011]

(1) Professor ___
(2) Associate professor ___
(3) Lecturer ___
(4) Assistant teacher ___
(5) Other ___
Please indicate _____ [012]

8. Please indicate in % terms how your work time, across an average week, is distributed.

(1) Management ___ [013]
(2) Clinical ___ [014]
(3) Teaching ___ [015]
(4) Research ___ [016]
(5) Other ___ [017]
Please indicate _____ [018]

9. What year you were first appointed to a position with formally recognised management responsibility?

19____ [019]

10. Which knowledge areas and skills have contributed most to your success as a hospital administrator? Please list up to three below.

1. _____

_____

_____

_____ [020]

2. _____

_____

_____

_____ [021]

3. _____

_____

_____

_____ [022]

11. Over the last three years have you implemented major changes in your work place?

(1) Yes ___ [023]

(2) No ___ [024]

If yes, please give examples:

_____

_____

_____ [025]

12. What have been some of the main improvements in the way the hospital is run over the last five years? Please list up to three below.

1. _____

_____

_____

_____ [026]

2. _____

_____

_____

_____ [027]

3. _____

_____

_____

_____ [028]

13. Taking the first of the three improvements you have just listed could you describe briefly how this improvement has:

1. contributed to improved patient care: _____

_____

_____ [029]

2. improved the efficiency of the hospital: _____

_____

_____ [030]

3. Other: _____

_____

_____ [031]

14. Could you identify and elaborate on any factors which may be operating to discourage you from applying your management knowledge and skills and implementing change in your job? [032]

_____

_____

15. What would be the single most important management reform that you would like to see in your hospital which would contribute to improved patient care and improved efficiency? [033]

_____

_____

_____

_____

16. Are there other management reforms would you like to see? [034]

(1) Yes ___

(2) No ___

If yes, please give examples:

_____

_____

_____ [035]

17. What are your greatest frustrations, difficulties or problem areas in your present position? Please list up to three below.

1. _____

_____

_____

_____ [036]

2. _____

_____

_____

_____ [037]

3. _____

_____

_____

_____ [038]

Please find the coloured insert now. On this insert a range of important knowledge areas and skills of importance in hospital management are listed as 11 groups and 55 specific competencies. Now please go on to answer the remaining questions.

18. If you were to leave your job, what would be the most important competencies to look for in your replacement?

Please indicate the most important competencies which would be needed in a replacement by listing, in priority order, at least six of the 11 main groups of competencies. (Rank the most important at Number One.)

Please indicate, for each group listed, three specific competencies from within that group which you see as particularly important in anyone replacing you in your job.

Rank	**Knowledge/skills item number**	**Three specific competencies (by item number from within each group)**	
1.	___	___ ___ ___	[39,40,41,42]
2.	___	___ ___ ___	[43,44,45,46]
3.	___	___ ___ ___	[47,48,49,50]
4.	___	___ ___ ___	[51,52,53,54]
5.	___	___ ___ ___	[55,56,57,58]
6.	___	___ ___ ___	[59,60,61,62]
7.	___	___ ___ ___	[63,64,65,66]
8.	___	___ ___ ___	[67,68,69,70]

19. What are some of the most serious deficiencies which respect to management knowledge and skills among managers in your hospital?

Please indicate the most serious deficiencies by listing, in priority order, at least six from the 11 main groups of competencies listed on the coloured insert. (Rank the most serious deficiencies at Number One.)

Please indicate, for each group listed, three specific competencies from within that group which you see as particularly lacking.

Rank	**Knowledge/skills item number**	**Three specific competencies (by item number from within each group)**	
1.	___	___ ___ ___	[71,72,73,74]
2.	___	___ ___ ___	[75,76,77,78]
3.	___	___ ___ ___	[79,80,81,82]
4.	___	___ ___ ___	[83,84,85,86]
5.	___	___ ___ ___	[87,88,89,90]
6.	___	___ ___ ___	[91,92,93,94]
7.	___	___ ___ ___	[95,96,97,98]
8.	___	___ ___ ___	[99,100,101,102]

20. Which are the areas of management and administration for which formal training would be particularly important to prepare people for successful performance in jobs such as your own?

Please indicate the areas for which training is most urgently needed by listing, in priority order, at least six from the 11 main groups of competencies listed on the coloured insert. (Rank the most urgent need at Number One.)

Please indicate, for each group listed, three specific competencies from within that group where formal training would be most valuable.

Rank	**Knowledge/skills item number**	**Three specific competencies (by item number from within each group)**	
1.	___	___ ___ ___	[103,104,105,106]
2.	___	___ ___ ___	[107,108,109,110]
3.	___	___ ___ ___	[111,112,113,114]
4.	___	___ ___ ___	[115,116,117,118]
5.	___	___ ___ ___	[119,120,121,122]
6.	___	___ ___ ___	[123,124,125,126]
7.	___	___ ___ ___	[127,128,129,130]
8.	___	___ ___ ___	[131,132,133,134]

FINALLY please add any further comments on the subject matter of this survey.

_____

_____

_____

_____

_____

Many thanks for your help!!

(The 'coloured insert')

The range of important knowledge areas and skills for Question 18, 19, and 20

1. Background Competence

1. Reporting writing and communicating effectively in writing
2. Skills and processes involved in transmitting ideas
3. Talking and listening to individuals and groups
4. Public speaking

2. Personal and Inter-personal Skills

5. Leadership abilities
6. Staff motivation
7. Performance evaluation
8. Personnel administration
9. Public and media relations
10. Dealing with conflict and stress
11. Working in groups and teams

3. Financial Management

12. Accounting principles and methods in the health services
13. Preparation and analysis of budgets
14. Analysis of financial information
15. Allocation and redistribution of financial resources

4. Analytical methods and information processing

16. Understanding and interpreting statistical data
17. Operational research and systems analysis
18. Computer application in the health services
19. Evaluation methods
20. Research methods
21. Understanding and interpreting epidemiological information

5. Health Policy and Politics

22. Formulating health policy
23. Implementing and administering health policy
24. Evaluating health policy
25. Legal concepts and regulation in the health services
26. Central, provincial and local government roles in health policy

6. Organisation Management

27. Organisation theories applied to the health services
28. Organisation design and function
29. Organisational behaviour
30. Assessing organisational strengths and weaknesses
31. Theories of management and leadership
32. Unique features of health services management
33. Inter-organisational relationships

7. Health Service Planning

34. Planning principles and processes
35. Workforce planning
36. Information for planning
37. Operation and strategic planning
38. Environmental design
39. Consumer participation in planning

8. Economic Factors in Health Services

40. Methods of financing health services
41. Theories of micro- and macro-economics
42. Economic analysis
43. Economic appraisal eg. cost benefit

9. Health Service Context and Structure

44. Structure and function of the Chinese health care system
45. Structure and functions of health care systems in other countries
46. Current issues affecting health services and administrative implications

10. Management of Change and Future Development

47. Analysis of future trends
48. Management of social and political change
49. Strategies of workforce planning for change
50. Methods of overcoming and modifying reactions to change
51. Methods of introducing new technology

11. Social and Cultural Aspects of Health

52. Concepts of health and illness
53. Health promotion and disease prevention
54. Ethical and moral issues in health care
55. Socio-economic and environmental factors in health

Other skills and knowledge areas you may wish to rate

_____

_____

_____

_____

昆明医学院——澳大利亚 La Trobe 大学
联合建立医院管理及卫生政策
培训与研究中心

医院管理人员调查表

这是一份关于医院管理人员管理基本情况的调查表，该调查属于昆明医学院和澳大利亚 La Trobe 大学一个合作项目的一部分。其目的在于了解医院管理人员的现状和他们对正规管理培训的需求情况，以便帮助学院寻求一个较好的管理培训途径及制定培训计划，从而提高医院管理人员的素质和管理水平，促进医疗卫生事业的发展。作为一名从事医院管理工作的管理干部，您的经历和意见对本项工作具有十分重要的意义。

请您按照有关要求认真填写调查表。调查表右上角的编号是为帮助追踪无应答者所设。请于一九九六年七月二十九日前将填写后的调查表返回医院院长办公室。

若您在填写过程中有不清楚的地方或任何问题，请与昆明医学院成人教育学院李云川同志联系，电话：5323613

谢谢您的合作

昆明医学院

一九九六年十月二十四日

请回答下列问题并在符合您自己情况的问题后面打✓
题目右侧[ ]中的数码为资料分析之用，与答题无关。

1. 性别 [01]

(1)男 ____

(2)女 ____

2. 年龄 _____岁 [02]

3. 最高学历 [03]

毕业年限 [04]

(1)中专 ____ _____

(2)大专 ____ _____

(3)本科 ____ _____

(4)研究生班 ____ _____

(5)硕士或硕士以上 ____ _____

(6)其它 ____ _____

请说明 _____ [05]

4. 专业 [06]

(1)医疗 ____

(2)药剂 ____

(3)医技 ____

(4)护理 ____

(5)其它 ____

请说明 _____ [07]

5. 工作单位 [08]

(1)第一附属医院 ____

(2)第二附属医院 ____

(3)第三附属医院 ____

6. 职务 [09]

(1)院长或书记 ____

(2)副院长或副书记 ____

(3)科长 ____

(4)副科长 ____

(5)科主任 ____

(6)副科主任 ____

(7)其它 ____

请说明 _____ [10]

7. 专业职称 [11]

(1)教授(或相当职称) ____

(2)副教授(或相当职称) ____

(3)讲师(或相当职称) ____

(4)助教(或相当职称) ____

(5)其它 ____

请说明 _____ [12]

8. 请用百分比说明您每周工作时间的分配

(1)管理 ____ [13]

(2)医疗 ____ [14]

(3)教学 ____ [15]

(4)科研 ____ [16]

(5)其它 ____ [17]

请说明 _____ [18]

9. 您第一次被正式任命、担任管理职务的时间

19 _____ [19]

10. 您认为哪些必要的管理知识和技能可以帮助您成为一名成功的管理者，请列出三项。

(1)_____

_____

_____ [20]

(2)_____

_____

_____ [21]

(3)_____

_____

_____ [22]

11. 在过去的三年中，您在您的工作单位（部门）实行过任何重要的医院管理方面的改进措施吗？ [23]

(1)是 ____

请举例_____

_____

_____ [24]

(2)否 ____

12. 在过去的五年中，您所在医院在管理方面有些什么主要的改进？请列出三项。

(1)_____

_____

_____ [25]

(2)_____

_____

_____ [26]

(3)_____

_____

_____ [27]

13. 请对上题您列出的医院管理工作改进的第一项作一简要陈述，说明它对：

(1)改善医疗服务的作用：_____

_____ [28]

(2)医院工作效率的提高(请举例说明)：_____

_____ [29]

(3)其它作用：_____

_____ [30]

14. 请指出阻碍您在工作中运用您所具有的管理知识和技能的主要因素是什么？ [31]

_____

_____

_____

_____

15. 您所在医院，您认为最重要的一项有利于改善医疗服务水平和医院工作效率的改革是什么？ [32]

_____

_____

_____

_____

16. 除第 15 题所指外，您还期望有其它提高医院管理水平的改革吗？ [33]

(1) 是 ____

请说明_____ [34]

_____

_____

(2) 否 ____

17. 在您所担任的管理工作中，您认为最主要的困难和问题是什么？

请列出三项

(1) _____

_____

_____ [35]

(2) _____

_____

_____ [36]

(3) _____

_____

_____ [37]

为了方便您答题，我们将主要的管理知识范围和技能列为 11 个组（请看彩色插页、附后），共包括了 55 项特殊管理才能。请回答 18、19、20 题。

18. 假若您即将担任其它新的工作职务，您认为接替您的人员应该具备哪些重要的管理才能？

请从彩色插页的 11 组管理知识范围和技能中选择您认为最重要的至少 6 组，并按其重要性先后排列，1 为最重要，并以此类推。

请在每一组中再选择 3 项您认为重要的特殊管理才能，并按其重要性先后排列。

顺序	管理知识范围及技能组号	每一组中选择的 3 项特殊管理才能号码	
1	____	____ ____ ____	[38, 39, 40, 41]
2	____	____ ____ ____	[42, 43, 44, 45]
3	____	____ ____ ____	[46, 47, 48, 49]
4	____	____ ____ ____	[50, 51, 52, 53]
5	____	____ ____ ____	[54, 55, 56, 57]
6	____	____ ____ ____	[58, 59, 60, 61]
7	____	____ ____ ____	[62, 63, 64, 65]
8	____	____ ____ ____	[66, 67, 68, 69]

19. 您认为在您所在医院管理人员中最缺乏的管理知识和技能是哪些？

请从彩色插页的 11 组管理知识范围及技能中选择您认为最重要的至少 6 组，并按其重要性先后排列，1 为最重要，并以此类推。

请在每一组中再选择 3 项您认为重要的特殊管理才能，并按其重要性先后排列。

顺序	管理知识范围及技能组号	每一组中选择的 3 项特殊管理才能号码	
1	____	____ ____ ____	[70, 71, 72, 73]
2	____	____ ____ ____	[74, 75, 76, 77]
3	____	____ ____ ____	[78, 79, 80, 81]
4	____	____ ____ ____	[82, 83, 84, 85]
5	____	____ ____ ____	[86, 87, 88, 89]
6	____	____ ____ ____	[90, 91, 92, 93]
7	____	____ ____ ____	[94, 95, 96, 97]
8	____	____ ____ ____	[98, 99, 100, 101]

20. 为培养具有较高管理水平的管理专门人才（比如您自己），正规医院管理培训应该重点强调哪些方面？

请从彩色插页的11组管理知识范围及技能中选择您认为最重要的至少6组，并按其重要性先后排列，1为最重要，并以此类推。

请在每一组中再选择3项您认为重要的特殊管理才能，并按其重要性先后排列。

顺序	管理知识范围及技能组号	每一组中选择的3项特殊管理才能号码	
1	____	____ ____ ____	[102, 103, 104, 105]
2	____	____ ____ ____	[106, 107, 108, 109]
3	____	____ ____ ____	[110, 111, 112, 113]
4	____	____ ____ ____	[114, 115, 116, 117]
5	____	____ ____ ____	[118, 119, 120, 121]
6	____	____ ____ ____	[122, 123, 124, 125]
7	____	____ ____ ____	[126, 127, 128, 129]
8	____	____ ____ ____	[130, 131, 132, 133]

21. 最后，请对其它任何有关问题提出建议或意见。

_____

_____

_____

_____

_____

（彩色插页）

主要的管理知识范围及技能内容

［供回答第18，19，20题，下列每一方框为一组（1—11），每组内设数项特殊管理才能（1）—（55）］

1. 医院领导者的基本素质及才能
   （1）写作水平
   （2）表达和交流思想的能力和技巧
   （3）与他人相互交流的能力
   （4）讲演能力

2. 人事及人际关系管理技能
   （5）领导才能及风范
   （6）职工积极性
   （7）履职评估
   （8）人事关系处理
   （9）新闻媒体关系
   （10）矛盾处理
   （11）集体领导

3. 财务管理
   （12）医疗卫生行业的财务原则及方法
   （13）经费筹措及分析
   （14）财务信息分析
   （15）经费分配及使用

4. 信息及信息管理

(16) 信息资料的分析及利用

(17) 操作方法及系统分析

(18) 计算机在医疗服务中的运用

(19) 信息评估方法

(20) 运作方法

(21) 社会医学信息的理解及利用

5. 卫生政策

(22) 卫生政策的规划

(23) 卫生政策的贯彻及执行

(24) 卫生政策的评估

(25) 对医疗卫生有关法律、法规的了解

(26) 中央、省级及地方政府在制定卫生政策中的地位和作用

6. 组织管理

(27) 组织学理论在医疗卫生工作中的应用

(28) 组织机构的设计和职责、职能

(29) 组织的行为

(30) 对组织所存在的优劣势的正确估计

(31) 领导者（管理者）的基础理论水平

(32) 医院管理的特征

(33) 组织内部关系

7. 医疗卫生计划

(34) 计划的原则及过程

(35) 人力计划

(36) 信息计划

(37) 策略及运作计划

(38) 环境设计

(39) 服务对象在制定计划中的作用

8. 医院经济管理

(40) 医院融资方法

(41) 微观和宏观经济学理论

(42) 经济学分析

(43) 经济效益评估　例如：成本——效益分析

9. 医疗卫生服务的内容和结构

(44) 中国医疗卫生系统的结构和职能

(45) 其它国家医疗卫生系统的结构和职能

(46) 影响现行医疗卫生管理运行所存在的问题

10. 变化及发展管理

(47) 对将来发展趋势的分析

(48) 社会变化和机构改革的管理

(49) 不同情况下合理使用人力资源的能力

(50) 调整自我、适应变化的能力

(51) 引进新技术的方法

11. 医疗卫生工作的社会性

(52) 健康及疾病预防的基本概念

(53) 卫生宣传及疾病预防

(54) 医学伦理及医德问题

(55) 社会经济及环境因素对医疗卫生事业的影响

您认为还应当具备的其它管理知识范围和技能

Appendix B

INTERVIEW GUIDELINES FOR HOSPITAL MANAGERS

Introduction

This interview is part of a development project directed at strengthening hospital management training in Kunming. Through this project we hope to identify the most pressing needs in the field of hospital management training and the most appropriate ways of addressing these needs.

This project is being conducted within the Kunming Medical College in collaboration with experts in hospital management training from La Trobe University in Australia.

As a practising hospital manager we are particularly interested in your experience and your opinions on this matter.

Your answers will be kept strictly confidential.

Do you mind if I use a tape recorder?

1. Could you start by telling me a little bit about the management dimensions of your job please?

2. What are the major problem issues presently facing your hospital?

3. What are some of the most difficult issues facing your personally with respect to the management responsibility of your job?

4. Did you have any management training or experience before you commenced in your present job?

5. What do you like most about your job as a manager?

6. What do you like least about your job as a manager?

7. Thinking about your role as a manager over the last five years, can you tell me about one of the more important improvements which you introduced into how your are works?

Prompt for details.

Would you care to tell me about some of the other improvements that you have introduced?

8. If you were to leave your job and had to be replaced tomorrow what are the six most important competencies that the hospital would need to look for in your replacement?

Prompt: Why do you say that?

9. Have there been improvements over the last five years in the way your hospital operates?

(1) Yes ____

What are the improvements?

How do you know that improvements took place?

What were they due to?

(2) No ____

10. Have there been deteriorations in the way your hospital operate?

(1) Yes ____

What are they?

Why?

(2) No ____

11. What would be the single most important management reform that you would like to see in your hospital which would contribute to improved patient care and improved efficiency?

Could you explain why?

12. What do you consider to be the major management areas where there is most need for management training in your hospital, including in-services training and support strategies?

13. What are the areas of management practice where you personally feel most need for more indepth knowledge and further skills?

14. During your career as a manager what are some of the most useful areas of management knowledge and skills that you have picked up on the job?

15. Are there any matters that we haven't discussed that you feel are important considering either the hospital administration improvement or the management training program?

Appendix C

CODING FRAMEWORK FOR INTERVIEW AND QUESTIONNAIRE DATA

Hospital Performance

Delivery of hospital care

- quality of care
  - patient satisfaction
  - medical accidents and disputes
  - service manner
  - inappropriate services
- efficiency
  - technical efficiency (efficient use of resources, inefficient use of resources)
  - allocative efficiency (inefficient allocation of resources)
  - inefficiencies in administrative departments

Organisational development

- enhancement in people/staff
- enhancement in revenue
- enhancement in equipment and supplies
- enhancement in buildings and amenities
- enhancement in equipment and supply

Management Practice

Contract managerial responsibility system (CMRS)

- quality of care
- hospital efficiency
- organisational development

Management of personnel

- issues of professional training \ staff development access
- interpersonal issues
- staff motivation and welfare
- rules and regulations

Quality management

- quality control
- strategies to improve service manner

Financial management

- strategies to control illegal commissions (purchasing medicines, extra tips from patients and referrals of patients to other hospitals).

Introduction of new technology

- development of new methods
- development of new equipment

Time management

- too many administrative chores
- too many meetings

Other aspects

- managing research
- managing teaching
- planning (no strategic planning / long-term setting)

Question 12 and 13 of questionnaire survey

Contract managerial responsibility system (CMRS)

- quality of patient care
  - improving patient satisfaction
  - service manners (improving service manner; bad service manner)
  - upgrading the quality of care
  - medical accidents
  - inappropriate service
- efficiency of hospital
  - improving the bed turnover rate and occupancy rate, shortening the length of stay
  - increasing the using efficiency of hospital's equipment
  - resource allocation
- Organisational development
  - enhancement in revenue
  - enhancement in buildings

Management Competencies

Specific managerial knowledge and skills

- managing personal relationships

- management of information system
- health policy
- financial management and health economics
- organisational management
- background competencies
- other areas (patient care and quality control, basic theory of management, managerial psychology, health law, medical ethics, management of teaching and research)
- no managerial language to speak about the management areas

Medical experiences

Personal ethics

Need for training

- lack of management expertise
- aspiration for management training

Training strategies

- planning of training
- training approaches (off-service training and in-service training)

Organisational Environment

Management autonomy

- relationships between hospitals and its authorities
- relationships between hospital administration and Party

Restrictive personnel policies

- size of employment establishment (unhealthy staff proportions; insufficient clinical staff)
- no power over dismissing
- limited power over recruitment
- staff remuneration (low salaries; high percentage of total income from bonuses and pressure for commissions; staff stabilisation)
- other aspects of personnel system (selection of managers; older professional staff)

Funding

- decreased government funds

Purchasing of equipment and medicines

- incomplete price deregulation
- widespread payment of commission

Accountability

- lack of meaningful measure of quality and efficiency (too many formalism inspections)

Increasing competition by private clinics and other public hospitals

- allocative efficiency

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