ISCTE Business School
Instituto Universitário de Lisboa

Hospital Reform in China: Challenge and Strategic Development of Ronggui Hospital

Huang Biliu

Thesis submitted as partial requirement for the conferral of

Doctor of Management

Supervisor:

Prof. Álvaro Rosa, Assistant Professor, ISCTE University Institute of Lisbon

Co-supervisor:

Prof. Jacky Hong, Professor, University of Macao

December, 2013

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Declaration

I declare that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed: Huang Biliu Date: 05-03-2014

Name: Huang Biliu

作者申明

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Abstract

Since China introduced the reform and opening-up policy, the health care in China has been experiencing remarkable progress. To a certain extent, the demand for health care by the population is being met. But public hospitals, as the most essential healthcare institutions, have been experiencing all kinds of conflicts in this area (Hu, 2010). Therefore, reform of public hospitals has become the most difficult part for deepening health care reform (Yan, 2010). As mentioned by Minister of the Ministry of Health, reform of public hospitals is the most arduous task. In February, 2010, five ministries including the Ministry of Health jointly issued the Guidelines on the Pilot Reform of Public Hospitals, and decided to carry out reform of public hospitals on a trial basis in sixteen cities across the country. This indicates that the new hospital reform has embarked on the arduous journey (Zhou, 2010).

This essay, based on a case study of Ronggui Hospital, aims to study the effect of the new healthcare reform and find out the opportunities and challenges brought about for county-level hospitals, such as Ronggui Hospital.

Ronggui Hospital, which is located in Shunde District of Foshan City,is a Level-Two Grade-A general hospital and a public institution with independent legal entity. There were twelve community medical care service stations, which were previously affiliated to the Hospital but have now been separated. The development of neighboring public hospitals and the spring-up of private hospitals have made market competition in this area increasingly fierce. It has been an hot issue that the management of Ronggui Hospital has been debating how the Hospital can develop in a characteristic way in Shunde and even the Pearl River Delta region.

Keywords: New healthcare reform; Ronggui Hospital; Strategic management; Market competitive strategy

Resumo

Desde a implementação da política de abertura e a introdução de novas reformas, os serviços de cuidados de saúde na China experimentaram um salto notável. Em certa medida pode dizer-se que as necessidades de cuidados de saúde da população são actualmente satisfeitas. Porém, os hospitais públicos que são o pilar fundamental do serviço de saúde, encontram-se numa enorme encruzilhada (Hu, 2010). A reforma dos hospitais é de longe a reforma mais problemática no âmbito do aprofundamento da melhoria dos cuidados de saúde (Yan, 2010) aliás, como refere o Ministro da Saúde, a reforma dos hospitais públicos é a tarefa mais árdua que tem em mãos. Em Fevereiro de 2010, cinco ministérios, incluindo o da saúde, em conjunto, estabeleceram o guia de reforma dos Hospitais Públicos e decidiram que essa implementação se iniciasse de forma experimental em dezasseis cidades da China. Este foi o sinal de início de uma jornada difícil.

Este trabalho é um estudo de caso do Hospital Ronggui e procura realçar os efeitos da nova reforma de cuidados de saúde bem como determinar as oportunidades e ameaças que pode enfrentar um hospital distrital como é o caso do Hospital Ronggui.

O Hospital Ronggui é um hospital geral de nível 2 – Categoria A e encontra-se localizado na cidade de Foshan no distrito de Shunde. É um instituto público dotado de personalidade jurídica própria. Este hospital possuía doze centros de cuidados primários agregados que com a reforma foram autonomizados. Nos anos recentes, o desenvolvimento de hospitais públicos de vizinhança e o florescimento de hospitais particulares colocaram grande pressão em termos de oferta de serviços e de sustentabilidade financeira. Este trabalho desenvolve um estudo estratégico para o crescimento do Hospital Ronggui tanto no distrito de Shunde como na região do Delta do Rio das Pérolas.

Palavras chave: Reforma de Serviços de Saúde; Hospital Ronggui; Gestão estratégica; Estratégia competitiva

Acknowledgments

I have been engaged in hospital management for more than ten years, and now I am the president of a Level-Two hospital. Over these years, what has been bothering me most is how to maintain the efficient sustainable development of the Hospital and excel in the fierce competition of the medical market. My work experience has made me aware that it is increasingly urgent for Level-Two hospitals to formulate appropriate market competition strategies in order to enjoy further development in the future. However, systematic research of market competition has only been carried out in recent years. In particular, application of previous research findings in Level-Two hospitals is still at the exploratory stage. Many difficulties and challenges are waiting to be addressed. Therefore, it is highly necessary for us to conduct a study to identify the appropriate ways to formulate comprehensive and systematic market competition strategies that apply well to Level-Two hospitals. This is why I chose Ronggui Hospital as a case study for my doctoral dissertation, which is aimed at studying market competition strategies against the backdrop of the deepening new medical reform and fierce market competition. Fortunately, I had the honor of being supervised by Professor Jacky Hong and Professor Alvaro Rosa. The two supervisors are both knowledgeable and rigorous. They have offered valuable suggestions for the design, research and writing of my dissertation. Here I'd love to express my heartfelt thanks to both of them!

When I was writing this paper, Professor Chen Shaoxian and Dr. Wang Lian from the School of Public Health Management of Sun Yat-sen University offered me their greatest support. To be specific, by conducting in-depth research, they obtained first-hand information of the Hospital. On this basis, they put forward highly constructive and feasible suggestions for the hospital to brave challenges, identify opportunities and formulate strategies for future development against the backdrop of the new medical reform. My sincerest thanks also go to both of them!

Besides, I'd also like to thank my colleagues who have shown me strong support during the three years of my PHD study. My sincere gratitude also goes to those who have

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Finally, I would love to give my special thanks to my family, who have shown me understanding and extended me care and love all the way through. Without their support and encouragement, I couldn't possibly have finished my doctoral dissertation while doing my job well at the same time.

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Chapter 1: Introduction

In this chapter, the author, based on an analysis of the current situation and development issues of county-level hospitals, introduces the theoretical framework of the present research, significance of the research and research methods in an aim to provide a theoretical basis for the formulation of hospital development strategies.

1.1 Research background

1.1.1 Current status of county-level hospitals

Public hospitals at county level, as an important part of China's medical service system, are placed at the center of China's medical service system. On the one hand, they serve as a link between the urban and the rural medical service systems. On the other hand, as major players in the rural medical service system, public hospitals play a fundamental role in overcoming the difficulty and high cost of accessing medical service .

Up to date, there are over twenty thousand hospitals in the Chinese Mainland, among which over one thousand are comprehensive and specialized hospitals under the category of "Level Three Grade A" (written as "三甲" in Chinese, which means the best of all hospitals, usually above county level) and six thousand are county-level hospitals (2012 China's Healthcare Statistics Summary). With abundant high-quality medical resources, Level-Three Grade-A hospitals have little difficulty in sustaining and developing their business. According to the newly implemented healthcare reform, the revenue and expenditure of township hospitals and community health service centers are managed in two separate lines directly by the central government. Therefore, their survival and development are not in danger. However, county-level hospitals are facing the dual pressure of both a huge number and fierce competition from large-scale hospitals and township hospitals (Li, 2012).

After the taxation reform in the 1990s, the administration of county-level hospitals was left to local governments which were usually faced with a tight budget and were not able to lend support to these hospitals as they wanted. What's worse, introduction of the

market-oriented approach in the previous round of health reform resulted in cut-throat competition between private medical service institutions and public medical service institutions of all kinds and at all levels. As China's economy grew further, the vast number of urban and rural residents started to demand for far better medical services and improved health. Without sufficient fund, county-level hospitals could neither afford the indispensable medical equipment nor retain competent staff to effectively enhance their comprehensive strength (Ji, 2012). As a result, they had to struggle badly for survival.

The CPC Central Committee and the State Council have been regarding the health care reform at county level as a top priority. In his famous Instructions on June 26th, 1965, the then-Chairman Mao Zedong explicitly pointed out that "emphasis of medical and health work must be laid on rural areas". In 1980, the Ministry of Health issued two consecutive guidelines, namely, the Opinions of the Ministry of Health on Reorganizing and Improving Health Services in One-Third of Counties and the Opinions of the Ministry of Health on Strengthening Work in County-level Hospitals. In June, 2012, the Office of the State Council issued the Notice of Opinions on Trials of Comprehensive Reform of County-level Public Hospitals(the General Office of the State Council, [2012] No.33). Against the backdrop of the new health care reform, reform of county-level hospitals were prioritized and pushed forward as the key task of public hospital reform.

Ever since the new health care reform was launched, county-level public hospitals have been enjoying rapid development, continuously improved service and significantly enhanced technologies. By 2010, county-level public hospitals affiliated with health administrative departments amounted to 5,411, with 672 million visits every year, taking up 30.7% of the total hospital visits. The number of patients discharged from county-level hospitals reached 40,824,000, accounting for 43.15% of the total number of patients discharged from all hospitals (*China Health Statistical Yearbook, 2011*).

Therefore, although confronted with tremendous pressure and difficulties, county-level hospitals were also embracing unprecedented opportunities for reform and development. Against the background of accelerated economic development of townships, the urbanization drive, and urban-rural integration, county-level hospitals had obtained a hard-earned economic foundation. The establishment and perfection of the new rural

cooperative medical system and the steadily improving social security benefits had also created further demand for medical services and in effect pushed forward the reform of county-level hospitals (Chen, 2011). Besides, completion of the standardization of medical facilities had also left room for software construction and institutional reform.

1.1.2 Problems facing county-level hospitals

1.1.2.1 Insufficient funding from local governments

Public hospitals are highly system-dependent. If public hospitals are to serve the public good, they have to first of all find their working capital. The new health care reform requires local governments to provide the fund for establishing county-level hospitals and purchasing medical equipment. However, are local governments able and willing to make the investment? If they are called to pay hospitals' years of debts, they may face the danger of bankruptcy. For now, investment made by county-level governments in county-level hospitals only accounts for 1.1% of the total hospital revenue or even less(Yao, 2005). But the fund used to update medical equipment accounts for over 10% of the total hospital revenue (This amount of investment is aimed at keeping up with the changes in the market, whether the claim "poor equipment leads to backwardness" is grounded or not.). How can the resource allocation made by local government meet the demand from the general public and keep up with latest advancements in technology?Public hospitals are required to serve public good on the one hand and operate with insufficient fund on the other. The government is banning the compensation system for the medical cost through drug-selling profits on the one hand, but unable to find a satisfactory solution to medical compensation practice on the other (Chai, 2011). This dilemma has forced hospitals to circumvent state policies and resort to other means to compensate for their losses. Some of the means include committing health care fraud and producing unintelligible prescriptions so as to sell patients medicine inside the hospital at a much higher price than that in ordinary drugstores, as well as requiring patients to be hospitalized when they in fact do not need to.

1.1.2.2 Lack of medical professionals

According to *China Health Statistics Abstract 2012* published by the Ministry of Health, eighty percent of China's medical resources are concentrated in large cities. And thirty percent of this share are concentrated in large urban hospitals. Only one third of the medical institutions below county level are able to run smoothly.Another one third are at the verge of collapse. And the rest one third are already paralyzed. Due to the low pay, backward medical facilities and difficult living conditions, few professionals are willing to stay in county-level hospitals to serve the grass-roots in the long-term. Besides, because of information asymmetry, many graduates from medical schools rush to hospitalsin large and medium cities or take other professions irrelevant to medical services. Moreover, without strong policy support, many medical professionals are not determined to perform their duties. Instead,once they have acquired rich clinical experience, they would leave for better jobs (Deng, 2010).

1.1.2.3 Prices of hospital medicine are higher than market prices

County-level hospitals purchase drugs, TCM decoction pieces and one-off medical consumables through open tender. To determine the bottom price, hospitals raise the price by15% on the basis of the tender price so as to allow medicine suppliers a reasonable profit. In spite of this, the tender price of some drugs is obviously higher than the market price, especially when TCM medicine is concerned. The prices of some drugs are even many times higher than market prices. Therefore, disputes between hospitals and patients over prices of medicine have being occurring on a rather regular basis (Zhang, 2010).

1.1.2.4 Inefficient hospital management

In most places, appointment of the director of a hospital is patterned after the ways of electing a general leader. The elected director is then appointed by the organization department of the Communist Party of China. Hospital directors do not have the necessary authority over job appointment and duty distribution inside the hospital. This has hindered the development of hospitals.

1.1.2.5 Limited cost management capacity

Although the economic benefit of county-level hospitals has improved in recent years,the hospital structure is yet to be optimized. The increased revenue mainly comes from charges of inspections, examinations and operations. No increase has occurred from doctors'diagnoses. Plus that there is no standard in hospital cost management, hospitals have been randomly managed(Wu, 2009). Apart from this, county-level hospitals are burdened with heavy debts from previous mismanagement. The utilization rates of both asset and fund are low and the capital turnover ratio is even lower. According to a report in Guangzhou Daily announced on January 12th, 2012, among the 192 county-level hospitals in Guangdong Province, 188 were burdened with an average amount of 48.26 million yuan of debt. Only four hospitals were free from debt. In an article entitled "How Should County-Level Hospitals Break Through?" Liao Xinbo, Deputy Director-General of the Department of Health of Guangdong Province, said that the working capital ratio of county-level public hospitals in Guangdong Province in 2010was 1.67% on average. As many as 78.42% of county-level public hospitals had a ratio even lower than the experiential safe boundary value and had been trapped in a vicious circle, suffering problems such as cash flow shortage.

1.1.2.6 A guiding mechanism for hospital layout and resource utilization is yet to be established.

County-level hospitals, although large in number, only provide 1/4 of outpatient service, emergent service and inpatient service out of their total volume of service. More complex diseases are still treated in large urban hospitals. Operations charged over twenty thousand yuan are rarely performed in county-level hospitals. Due to vague division of service areas and functions, county-level hospitals have been blindly enlarging their scale, regardless of the low utilization rate of medical service resources. Besides, due to a lack of competent medical staffs, the service quality of these hospitals is still not widely recognized. In some regions, county-level hospitals are even competing with medical institutions at grass-root level for patients in need of basic treatment.

Meanwhile, the systematic reform has not yet achieved the target that hospital beds,

medical and administrative staff are allocated in light of the degree of urbanization, background of patients and changes in disease spectrum. The existing standard was established in 1978, by which medical staff are allocated according to the number of hospital beds. In some places, hospitals are even graded and managed according to the level of the administrative region they are located in.

1.2 Research question and methods

1.2.1 Research question and objective

Since the latest hospital reform was implemented, people have been enjoying improved health care services. But competition between different hospitals has also grown more fierce. To address the increasing competition,a considerable number of hospital managers have taken hasty steps. To be specific, they compete for purchasing advanced equipment without knowing the advantages and disadvantages of their hospitals, changes of the environmental as well as opportunities and challenges facing their hospitals. They only care for immediate profits, regardless of the long-term goals of their hospitals. Confronted with an ever-changing and complicated environment, hospital managers lack strategic thinking and strategic management capacity.County-level hospitals, which are at the bottom of China's general hospitals, occupy the largest number yet are not backed up by advanced technology. As a result, both their economic benefit and their competitive edge fall significantly short of those of large Level-Three Grade-A hospitals. Therefore, it is vital for county-level hospital directors to determine strategic positioning and formulate market competition strategies for county-level hospitals in the new round of health care reform. Against such a backdrop, strategic research with Ronggui Hospital as a case study can shed some light on improvement of county-level hospitals.

With necessary policies in place, sufficient financial investment and expanded market scale, county-level medical institutions have been promised a golden opportunity for development. Then, how can county-level medical institutions take advantage of this opportunity and achieve a historic breakthrough?

1.2.2 Research methods

This thesis is based on the author's hospital working experience and theoretical knowledge. As the latest health care reform deepens, the author first proposes the research question of how should hospitals formulate strategies and achieve strategic management? Then the author carries out in-depth research on and analyses of Ronggui Hospital's strategic planning for market competition and its current situation of management, in an aim to find out a universal strategic management solution for market competition that also suits with the distinctive characteristics of Ronggui Hospital.In this way, the author hopes to offer some valuable lessons for county-level hospitals to draw upon in the future. .

In this paper, the author applies the strategic management theory and adopts strategic management tools (including PEST analysis, three competitive strategies,BCG, BCS, SWOT and trend extrapolation) to conduct analyses and research in light of the internal and industrial environment of Ronggui Hospital. Besides, the author also designed the "Questionnaire on the Current Situation of Ronggui Hospital" and the "Questionnaire on Market Demand for Ronggui Hospital in Shunde District, Foshan City" to conduct random investigation among local residents and in-depth interviews among hospital employees in order to understand people's demand for medical service and employees' views on Ronggui Hospital's competitiveness in the current medical market.

Hospital directors should accurately position their hospitals in the medical market, have a keen sense of the advantages and disadvantages of their hospitals, respond to changes in the external environment, grasp opportunities for development and address existing challenges.On this basis, they should carefully choose and formulate proper competition strategies for hospitals, determine strategic objectives, and lay out feasible operational steps and evaluation methods. To take a step further, they should work on improving the organization and operation mechanisms and building up hospitals' own core competitiveness against the backdrop of insufficient governmental funding and improper management. All these endeavors are made with the ultimate purpose of achieving healthy and steady development for hospitals.

1.3 Thesis structure

In this paper, Ronggui Hospital is used as a case study. Comments from media and literature in the academia on healthcare reform of county-level hospitals in recent years are reviewed. In particular, analyses are made from the perspectives of the background, major steps and effects of the new medical reform, as well as the opportunities and challenges it has brought out. Besides, the author also uses relevant management theories to analyze the internal and external environment as well as competition strategies of Ronggui Hospital. Strategic thinking on differentiated competitive strategies and specific implementation measures are proposed to enable the Hospital to stand out from fierce competition and serve as a good example for county-level hospitals to succeed in the context of the new healthcare reform.

The present dissertation is comprised of: thesis title, abstract, keywords, main body (five chapters), bibliography, appendices and acknowledgments.

Chapter 1: Introduction. In this chapter, theoretical framework, significance of the research and research methods are proposed based on analyses of the current situation and development issues of county-level hospitals in an aim to provide theoretical basis for establishing hospital development strategy.

Chapter 2: History of China's Health Care Reform and Literature Review. This chapter provides a review of comments from the press and papers published by scholars on the reform of county-level hospitals as well as analyses of the current situation of China's healthcare and medical systems and a conclusion of the achievements, problems and reasons for the failure of the former healthcare reform. The background, purpose and major policies of the new healthcare reform are introduced. The current situation of county-level public hospitals is clarified, with a focus on the challenges brought about by the new healthcare reform as well as the government's reduction in investment and insufficient funding.In addition, new opportunities for development are also pointed out. All these are aimed at providing a reverence for other county-level hospitals to formulate development strategies.

Chapter 3: Research Methods. This chapter presents methods employed in collecting data for this dissertation and clarifies how data is accessed and analyzed and how the paper is

arranged. Besides, research approaches and structure are also specified in this chapter.

Chapter 4:Choice and Implementation of Hospital Strategies. This chapter introduces the environment of Ronggui Hospital. The author analyzes the internal and external environment and competitive strategies of the Hospital by using relevant management theories. Differentiated market strategies and the respective implementation methods are proposed for the Hospital .

Chapter 5: Summary and Implications.Implications of the present research are pointed out. Limitations of the study and suggestions for further research are lighted upon for future reference.

Chapter 2: History of China's Health Care Reform and Literature Review

This chapter provides a review of comments from the press and papers published by scholars on the reform of county-level hospitals, analyses of the current situation of China's healthcare and medical systems as well as a conclusion of the achievements, problems and reasons for the failure of the previous healthcare reform. It also introduces the background, purpose and major policies of the new healthcare reform. Besides, the current situation of county-level public hospitals is clarified, with a focus on the challenges brought about by the new healthcare reform, as well as the government's reduction in investment and insufficient funding.What's more, new opportunities for development are pointed out. All these are aimed at providing a reverence for other county-level hospitals to formulate development strategies.

2.1 The status quo of China's healthcare system

Since the reform and opening up, China has enjoyed rapid national economic development At present, the per capita GDP of Chinese people has exceeded 4,000 USD (People's Daily, 2011). However, due to financial difficulties, about 48.9% Chinese residents choose not to go to hospital when they are sick, and 29.6% choose not to be hospitalized even when they need to (Lu ,2007). In 2007, the Green Paper on Social Security revealed that during the fifteen years from 1990 to 2004, the per capita medical expenditure of China's urban and rural residents increased by 19.75 times, much faster than the growth rate of revenue. This not only created a heavy financial burden to individuals, businesses, and the country, but also resulted in serious economic and social problems. Besides, unfairness has also plagued the health sector, making healthcare services unaffordable and inaccessible for some people and some patients that are unwilling to seek medical treatment (Chen,2007).

It can be seen from the trend of total health expenditure over the 26 consecutive years from 1978 to 2003that China has experienced a rapid growth in its total health expenditure

since the mid-1990s. At the beginning of the reform and opening up in 1978, total health expense only amounted to around ten billion yuan a year, including investment from the government, individuals, industrial and mining enterprises and non-governmental resources. By 2003, total investment in the health sector from the whole society had reached 660 billion yuan. When measuring changes of China's health investment and GDP according to the proportion of the total health expenditure in GDP, statistics show that the expenditure to GDP ratio from 1978 to 1995 had increased very little, only by around 3%. But the growth rate had risen to 5.62% by 2003. Recent eight years have seen the fastest growth rate. Besides, since 1995, the growth rate of total health expenditure has far exceeded that of GDP. However, according to the World Health Organization, China's overall medical and health level ranked 144th, while the fairness of its health services ranked 188th, the last but three across the globe (Bai, 2005) .The inconvenient truth is out of pace with China's status as a great power, its rapid economic development and national conditions. Absence of fairness in the medical and health sector has stood in the way of China's social development.The main reason is that, in the market economy,the commonweal nature of the medical and health sector and the idea of "putting people first and health as the top priority" have not received due attention.For example, investment in the medical and health services in developed countries accounts for over 10% of national GDP. The figure has reached 7.9% even in Brazil, 6.1% in India, and 5.8% in Zambia.But the ratio in China is only 5.4%, and the investment in the medical and health sector from the government has been decreasing year by year (Hana,2010).

Medical cost has been soaring and individuals have been paying a huge proportion of medical expense. From the global perspective, medical consumption will increase infinitely. Increase in spending is inevitable because of the development of medical science such as the introduction of new technology, new equipment and new drugs.However, the real problem in China are the soaring medical cost and the high proportion of personal healthcare expenditure. According to statistics from the Ministry of Health, per-capita expense of outpatient and inpatient services has achieved an average annual growth of 13% and 11% over the last eight years, much higher than the growth rate of per-capita income.In 2004, China's total health expenditure accounted for 5.5% of its

GDP, while the proportion of personal expenditure rose from 21% in 1980 to 54% in 2004.In other words, Chinese residents have been paying for the cost of healthcare services by themselves (Chen, 2007; Ministry of Health, 2009).

The structure of China's medical institutions is basically similar to the administrative division and the structure of government organizations.In China, government administration is divided into five levels: the central government, province, city, county and township (street). Regions of each level are equipped with health institutions (such as hospitals, centers for disease control and health supervision institutions), private medical institutions owned by enterprises, Sino-foreign hospitals and military hospitals. In terms of ownership, health institutions in China now are highly diverse. Some are owned by enterprises and some by individuals. Besides, since the mid-1980s, foreign investment has been allowed into medical institutions and used to set up share-holding hospitals, with the highest holding ratio of 70%. However, prior to China's accession into the WTO, the ratio of foreign investment against the total investment into existing medical institutions was controlled below 30% and foreigners were not allowed to become hospital stakeholders in China (China's Ministry of Health, 2000). After the government adjusted its policies, the ceiling ratio was raised to 70%, but foreign investors were not allowed to have sole proprietorship.In terms of openness of health services, China was the most liberal country among all developing countries after its accession into the WTO. In comparison, many countries, including Canada, the United Kingdom, the European Union and the United States, are not open in this regard as they regard things related to people's lives and health, such as health care services, as confidential.There are also some medical institutions in the army, which resemble small communities. Seeing from the number of medical institutions, in 1950, there was still a very small number throughout China. However, by 1989, the number had risen to over 170,000. In recent years, some efforts have been made, such as, restructuring of health resources, regional planning of the health sector as wel las merger of villages and towns in rural areas.Although the number of health institutions has decreased in recent years, it is still close to 300,000 (Lei, 2010) .

China was praised by the WHO as a model in medical and health services among developing countries (Bai, 2005).While summarizing China's successful experience, the

WHO stated that although China was poor, it had built up a three-level medical insurance net covering both urban and rural areas. In fact, China is a pioneer in establishing the cooperative medical institutions among developing countries. On the one hand, such a medical system not only helps ensure the normal operation of medical institutions in rural areas, but also functions to keep medical cost under control. On the other hand,it ensures the accessibility of health care services to all farmers.The reason why this system has succeeded is that there is a team of 'barefoot doctors' (untrained medical staff) in grass-roots rural areas mainly engaged in disease prevention, healthcare and disease control.However, at the beginning of the reform and opening up, the cooperative medical system was classified as a product of the Cultural Revolution, and a competition mechanism was set up to force each cooperative medical institution to generate as much profit as possible, resulting in the collapse of the three-level medical insurance net.After the disintegration of the old cooperative medical system between 1983 and 1984, the Ministry of Health has been calling for reestablishment of the cooperative medical institutions. Now more than two decades have passed, yet no progress has been made .After the end of SARS in 2003, the new cooperative medical system functioned quite well. By the end of 2005, the new rural cooperative medical system had covered 671 counties with a population of 177 million, larger than the number of urban workers with basic medical insurance.Urban medical insurance, launched in 1998, incorporates public health services and business-oriented labor insurance healthcare. From 1999 to the present, altogether 137 million people have been covered by urban medical insurance, roughly equal to 36% of the number of urban residents in 2005 (Lei, 2010).Nevertheless, it has become more and more difficult to push this system forward further. In particular,some enterprises facing financial difficulties are not able to afford the premiums.Strictly speaking, the urban medical insurance is not a form of socialized medical insurance, because it is not mandatory and does not have financial support from tax revenue.

2.2 History of China's healthcare reform

Based on the characteristics of China's economic reform at different stages and the actual progress of the medical reform, reform of the healthcare system can be divided into

five stages (Zhou, 2008) .(Xu, 2010)

2.2.1The case of healthcare reform

2.2.1.1 Stage I: From 1978 to 1984

China's 30-year reform began in 1978 with the implementation of the rural household contract responsibility system. On the one hand, the reform functioned as a driving force for the healthcare reform. On the other hand, the economic system reform had a profound impact on China's social development and constantly posed new requirements on health care services.Seizing the opportunity of reform, the health sector began to strengthen the management of health services according to the Party's principles. In 1979, Qian Xinzhong, the then-Health Minister, said in an interview that "economic means should be used to manage health services". And he also stated in the Secretarial Meeting of the Health Department that "priority should be put on modernization of health care services, especially in building one third national-level key counties". In the same year, the Ministry of Health and other two ministries jointly issued the Notice on Strengthening the Pilot Work of Economic Management in Hospitals. Later on, they established the economic responsibility system with "five fixes and one prize", put forward measures of "providing fixed amount of subsidy, conducting economic accounting, and determining awards and punishment by assessment", and implemented these measures on a trial basis. Soon, drawbacks of the traditional hospital management approach gradually revealed themselves at the pilot stage. Afterwards, policies on strengthening hospital management were introduced.In March 1981, Ministry of Health (1981) issued the Interim Measures on Economic Management of Hospitals and Advice on Strengthening Economic Management of Health Institutions, beginning to reverse the situation that health institutions were not good at business accounting. On this basis, the Ministry of Health promulgated the Regulations on the Work of Hospitals in 1982, explicitly specifying requirements on hospital-related work in the form of administrative regulations. This legal document not only reinforced the management of hospitals, but also diversified the healthcare entities for the first time. In 1980, the Request for Instructions on Allowing Individuals to Practice Medicine,formulated by the Ministry of Health, was approved by the State Council. This

document laid a solid foundation for the dominance of state-owned and collective medical institutions and diversification of ownership of medical service institutions.Meanwhile, to some extent, it made up for the insufficient investment in medical resources from the central government, facilitating the reform of state-owned hospitals.

The reform at this stage was aimed at adjusting and restructuring the health system that had been seriously damaged during the ten-year Cultural Revolution. Specific measures included personnel training in business technology, reinforcement of economic management of health institutions and so on.Because there were no institutional changes,the healthcare reform at this stage can only be considered to be in the budding period.

2.2.1.2 Stage II: From 1985 to 1992

The Year 1985 marked the beginning of China's medical reform. In this year, the State Council endorsed the Report on Policies and Issues about the Health Reform (State Council, [1985] No. 62), in which it was stressed that "reform measures like opening up policies, streamlining administration procedures, conducting deregulation and financing from multiple sources must be taken to further improve health services". This marked the official initiation of China's comprehensive medical reform.In order to promote the smooth progress of reform, the Ministry of Health issued the Policy Demarcations in the Health Reform in August 1985 as a supplementary policy to better implement regulations of the No. 62 Document.In 1989, the State Council endorsed the Opinions on Issues of Expanding Healthcare Services (the State Council, [1989] No. 10) proposed by the Ministry of Health, the Ministry of Finance, the Ministry of Personnel, the State Price Bureau and the State Administration of Taxation.It is further put forward in this document that the market-oriented approach should be adopted to fully arouse the initiative of enterprises and relevant personnel so as to broaden the scope of health services. In November 1988, the State Council issued the "Three Confirmation"Program of the Ministry of Health (namely confirmation of functions, institution and establishment).This program defined the basic functions of the Ministry of Health, which was to indirectly, rather than directly, manage the enterprises and institutions directly subordinate to it. In

November 1989, the Ministry of Health officially issued the notice and measures on the implementation of level-to-level administration of hospitals.Hospitals were divided into three levels with ten grades according to their respective tasks and functions. This practice is not only more objective in reflecting the actual level of hospitals, but also conducive to the orderly cooperation and competition among hospitals under the control of the government.Since 1990, China has been continuously making progress in health reform. In the meeting of the directors of health departments across the country, representatives summed up the experience of health reform and put forward requirements to further rectify and deepen the reform on the basis of implementing the principles of the Fifth Plenary Session of the Thirteenth Central Committee.

The reform at Stage II was mainly aimed at addressing issues in the management system and operation mechanism. The government was determined to formulate suitable policies to back up the reform instead of directly allocating money to the health care sector. Because of the economic system reform in various fields, the health sector was inevitably affected by the reform of state-owned enterprises (SOEs). Impacts included gradual decrease in direct investment from the government and introduction of the market-oriented approach into medical institutions (Zou， 2008). However, disadvantages immediately showed up: The first was seriously insufficient investment from government in public health; the second is accelerated breakup of the health and epidemic prevention network for rural areas; the third is degeneration of work ethics in the healthcare sector. Because independent management and responsibility for one's own profit and loss were over-emphasized in the sector, all medical institutions began to pursue maximized profit and economic efficiency. Then, the style of work in the medical and healthcare sector started to corrupt. For example, some famous doctors started to moonlight, and some doctors even prescribed irrelevant items such as electronic cookers for patients.

2.2.1.3 Stage III: From 1992 to 2000

In September 1992, the State Council issued the Opinions on Deepening Reform of the Medical and Health Care Systems. The Ministry of Health was responsible for implementing the principles of "relying on the government to improve the systems and

depending on oneself to earn breads" and the spirit of "generating income from sideline and small industrial enterprises to subsidize the development of agricultural production and medical and health service". Medical institutions is required to actively develop sideline and other industries of health outreach service. These measures basically are the generalization and continuation of previous reform measures since 1985. To be specific, introducing contract responsibility system into medical service system and implementing business operation. (Wang, 2012) Although this policy brought more revenue for hospitals to make up for shortage of income, it weakened the commonweal nature of medical institutions,resulting in problems of accessing medical service and complaints from the general public. Since then, there have been ongoing debates in the healthcare reform over whether the lead should be taken by the government or the market. Moreover, the issue gradually became a bone of contention widely discussed in all sectors of the society.As for the management of medical institutions, the Ministry of Health issued the Notice on Strengthening the Medical Quality Management in September 1993, requiring medical staff to raise their awareness of the importance of delivering high-quality medical service.In February 1994, the State Council issued the Regulations on Medical Institutions(the State Council, Decree No. 179), legalizing practice management of medical institutions with specific regulations on the planning, distribution, accreditation, registration, practice, supervision, management, and relevant legal responsibilities of medical institutions.In January 1997, the CPC Central Committee and the State Council jointly issued the Decisions on Health Reform and Development, which clearly put forward the goal and guiding ideology of health services, as well as the general requirements of health reform. Stage III was still the exploratory stage for healthcare reform. Although there had been inevitable disputes over the introduction of the market-oriented approach into medical institutions, various exploratory reforms still kept moving forward. The original principle of "leveraging economic means to manage the health sector" was still observed. At this stage,many new requirements from patients like surgery by a designated doctor, demand for special care, and demand for special wards sprung up in the medical system like mushrooms.

2.2.1.4 Stage IV: From 2000 to 2005

As the market-based health services continued to evolve, the amount of government investment in the health sector increased year by year. But proportion of the investment against the total health spending was on the decline. With insufficient investment coupled with inappropriate policies, township hospitals and local state-owned hospitals in some places were sold or publicly auctioned before 2000. In February 2000, the State Council issued the Guidelines on Reform of the Medical and Healthcare Systems in Cities and Townships. This document included several principles, such as the implementation of separation of pharmacy from hospital.It also encouraged various medical institutions to collaborate and merge so as to jointly build a medical service group. Bedsides, profitable medical institutions were required to relax control over the price of medical service,exercise independent management and pay taxes in accordance with relevant laws and regulations. In a word, the Guideline laid a solid foundation for the completely market-oriented medical reform. In 1999, eighteen township hospitals and three municipal hospitals were auctioned in Haicheng, Liaoning Province;all the township hospitals in Xiaoshan, Zhejiang Province were also sold; and the health centers in Linyi, Shandong Province and those in Tongjiang and Shehong of Sichuan Province were also auctioned. In March 2000, the health center in Suqian were publicly auctioned, which marked the start of the ownership reform of hospitals. Altogether more than one hundred were auctioned. As a result, government capital was withdrawn. (Li, 2010).In 2001, Wuxi municipal government endorsed the Notice of Opinions on the Responsibilities of Municipal Hospitals Implementing Mandatory Asset Management of Medical Services (Trial), in which the idea of trusteeship was first proposed. In early 2002, the Proposals on Reform of Investment and Financing of Shanghai Municipal Health Institutions was promulgated, which was another exploration of the ownership reform. Relevant departments also carried out pilot reform of “separation of pharmacy from hospital” in local areas, but made no significant progress.In early May 2005, officials of the Ministry of Health severely criticized the weakening commonweal nature of public medical institutions and their overemphasis on the pursuit of economic benefits, and underscored the importance of adhering to the model where the government assumes the leadership and the importance of

the introduction of market-oriented mechanism. The ownership reform is not a major means for medical system reform. It does not advocate "deterioration of the state-owned and the advancement of the private-owned".In 2005, the Healthcare Reform Research Team of the Development Research Center of the State Council said that China's healthcare reform was basically unsuccessful (the Research Team of the Development Research Center of the State Council, 2005). Shortly after, the then-Health Minister Gao Qiang delivered a special report at the meeting on current situation. During the meeting, Gao mentioned that the previous healthcare reform was flawed with problems, and it could hardly be called a success. Since then,there have been heated debates on healthcare reform.

In fact, this stage is the one with the most overlaps between different trends. With the deepening of the reform, the market-oriented approach played a significant role, but revealed a number of drawbacks at the same time. For instance, the outbreak of SARS in 2003, being a severe test to the health system, intensified the debate on whether the leadership should be assumed by the government or the market. There were many social problems at this stage, especially the difficulty to access and the high cost of medical service.

2.2.1.5 Stage V: Since 2005

With the deepening of marketization and the ownership reform, the commonweal nature of public medical institutions has gradually weakened and the pursuit of economic interests has begun to spread in the healthcare field. The medical system reform was in urgent need of new ideas and vitality.There have been debates over the market-based model all the time inside the Ministry of Health. In September 2005, the United Nations Development Program（UNDP）China Office issued the "2005 Human Development Report", pointing out that China's medical system had failed to help those in the greatest need, especially farmers. So the conclusion was drawn that the healthcare reform in China was not successful. This conclusion echoed the findings of the Research Team of the State Council Development Research Center.In September 2006, the healthcare reform coordination group including eleven ministries was set up, with the Director of the National

Development and Reform Commission and the Health Minister as joint leaders. This marked the official initiation of a new round of medical reform. In early 2007, the healthcare reform coordination group entrusted six agencies, later nine agencies, to conduct independent and parallel research so as to provide reference for decision-making.In the Report of the Seventeenth Communist Party Congress, a complete healthcare system framework with Chinese characteristics was proposed for the first time, including four important systems of public health service, medical service, medical security and medicine supply security. This framework, provided a comprehensive overview of healthcare system in the new era. (Xia, 2009)

2.2.2 Achievements and failures of the earlier healthcare reform

2.2.2.1 Achievements of the earlier healthcare reform

With competition and investment from non-governmental resources, the healthcare sector was able to provide much better medical services than before. To be specific, the number of medical institutions, doctors as well as hospital beds was significantly larger than that in the period of planned economy; technical equipment and professionalism of the medical staff were both markedly improved; meanwhile, hospitals were able to carry out more clinic treatment items (Bo, 2005).In addition, the previous healthcare reform broke the dominance of public hospitals, replacing it with public ownership taking the dominant role and different economic sectors developing side by side. There also appeared some jointly-operated hospitals established by different sectors, located in different regions, and with diverse forms of ownership. This newly-formed structural pattern of hospital ownership was increasingly suitable to the socialist market economy system. The hospital management system had evolved from the starting stage characterized by administrative order to the development stage featuring imitation of SOE reforms, then to the adjustment stage featuring improvement of internal operational system, and finally to the transformation stage featuring furthered system reform and strengthened scientific management. The aim is to establish and improve hospital operation system and enhance the competitiveness and service quality.As China's medical reform gradually progresses and becomes increasingly market-oriented, the medical market and medical industry

improve day by day accordingly; customers have greater participation and experience in this process; and the consumption behavior becomes increasingly rational. Besides, hospitals are faced with a new competition environment that is distinctly different from the past. For example, introduction of new medical technologies and technological innovations, participation of foreign capital and mature foreign medical management companies, and diversification of competition have all prompted the self-improvement and self-development of hospitals.In addition, the reform of ownership and that of management system,along with multi-level competition, have significantly motivated the medical service institutions and relevant staff, and also helped improve internal operating efficiency of institutions. (Wang, 2012)

2.2.2.2 Failures of the earlier medical reform

First, in terms of equal access to medical services, the satisfaction degree of different people in need of health care has polarized severely because of the increasing income disparity.Although the needs for healthcare by affluent people can be fully satisfied, the majority of people (including quite a few rural and some urban residents) could hardly found their needs met due to financial difficulty, let alone the under-privileged who had no access even to basic healthcare services.Second, in terms of macroeconomic performance of health investment, despite the substantial increase of health investment in the whole society, there was no significant improvement in overall health indicators of residents.In 2002, though the total health expenditure to GDP ratio has increased to 5.42%, some hygienic indicators or health indicators decreased in some areas, especially in the field of public health. Some infectious diseases or endemic diseases that had been held under control before the reform and opening up began to resurge, leading to constant new hygienic or health problems (the State Council Development Research Center, 2005). Thus, unfairness and macro inefficiency led to negative social and economic consequences. They not only affected the health of citizens, but also caused a series of social problems such as poverty, increasing public discontent and unbalanced relationships between different groups. Besides, negative expectations in healthcare issues of the majority of residents became an important factor causing insufficient demand of macro-economy.If

things remain unchanged, not only economic development will be hindered, but also social stability and public support for the reform will be endangered.

2.2.2.3 Causes of failure

The causes of failure of China's healthcare reform lie in excessive government intervention in areas where market functions well and lack of fulfillment of government responsibility in areas where market fails to work(Lu, 2007). In analysis of the current situation of China's healthcare reform, the market-based medical reform in China is represented in two aspects: On the one hand, in terms of allocation of or investment in medical resources, the market is still not open enough. There are even monopolies. On the other hand, there is overreliance on the role of market in medical services. In other words, the part of the medical market that should be open has not been opened, whereas the part that needs the government to supervise by regulations has not been supervised. This is a major problem of China's healthcare reform at present.(Zhu, 2010)

In further analysis, with policy support in the form of preferential policies from the government, non-profit institutions enjoy the majority of quality resources to the extent of monopolizing the market. Meanwhile, as the government has not yet allowed all forms of investment into the medical market, non-governmental capital cannot be absorbed in the market. ,However, individual clinics and private hospitals cannot get strong support from the government. (Chen, Liu, & Wang,, 2008)

Besides, the government has not fully fulfilled its due responsibilities. An important reason is that an effective mechanism for financial investment allocation is not yet in place. For hospitals whose main business are medical services, their medical services are largely underpriced as a result of insufficient consideration of factors such as high risk and superior technical difficulty in the industry. (Yang, Wu, Su, Xiao, Yang, & Zhao, 2012)

Another reason is the lack of a medical insurance system with universal coverage, a rational medical resources distribution system, a sophisticated primary medical service system, as well as a referral system between hospitals providing the primary, secondary and tertiary medical service. All these deficiencies have made health services unaffordable and inaccessible for some people. Besides, a large number of ordinary patients flock to

specialist doctors; most non-emergency patients directly go to hospitals to seek primary medical service without recommendations for transfer treatment from general practitioners; and non-emergent patients are allowed to directly go to hospitals that provide secondary or tertiary medical services to seek primary medical service. As a result, hospitals that provide secondary and tertiary medical services are in lack of medical resources whereas hospitals that provide primary medical services have their medical resources lay idle.

Moreover, procedures for drugs distribution are too many, and health insurance agencies have not fulfilled the function as third-party purchasers. Instead, they simply pay medical bills. This is also an important reason for the rapid increase of medical cost.

2.3 Analysis of the new medical reform

2.3.1 Background

In the early 1990s, hospitals in China launched the new medical reform by allowing staff to hold shares and started the ownership reform on a pilot basis. This decision was made on the basis of drawing from experience of the successful reform of state-owned enterprises and taking into account the features of the medical industry (Jiang, 2006). The government started the first round of reform by providing subsidy for hospitals, specifying a fixed quota of workload and introducing a contract-based system, limiting prices of medical services and delegating power to lower levels.Against this backdrop, in order to arouse the initiative of medical staff, hospitals strengthened economic means by increasing service items and expanding scope of service on the one hand, and set up an economic responsibility system that promised extra pay for extra work on the other. These measures, to some extent, increased revenue for hospitals and income for doctors and mobilized the enthusiasm of medical staff. However, as the government had been providing the medical sector with policy rather than financial support, hospitals gradually corrupted. To be specific, they started to compensate for medical losses by selling expensive drugs and raise medical examination fees when drugs-selling was controlled. As their business income was closely linked to personal income, doctors started to produce unnecessary prescriptions and checkups for patients. The ethics of doctors corrupted sharply, which severely harmed the reputation of hospitals, worsened the relationship between doctors

and patients, and caused medical services to be inaccessible and unaffordable for some patients. Against such a background, public hospitals were faced with unprecedented challenge for further development. Therefore, an in-depth reform became an inevitable choice.

2.3.2 Direction of the new medical reform

A review of healthcare reforms in other countries shows that focusing on both fair fund-raising and efficient medical services is a trend. In the healthcare reform of the UK, the government introduced more competitive factors to improve efficiency and quality of medical services.As for the U.S., the Healthcare Legislation passed in December 21, 2009was aimed at increasing the coverage of the health insurance system and improving the quality of medical services (Cai, 2007). The German healthcare reform highlighted fair fund-raising and added risk-sharing between different insurance funds.Although there is no perfect health care system in any country and there may never be a perfect one due to constantly changing factors, a satisfactory model and direction have already been pointed out.

2.3.2.1 Government-dominated model

Basic healthcare services are mainly provided by public health institutions, rural health institutions and urban community health institutions with appropriate medical technologies and essential drugs. The personnel expense and operating expense are funded by the government. The intended purposes of medical insurance are no longer left to be fulfilled by large general hospitals alone. Instead, a model that includes “basic health care system” and “multi-level medical security system” are to be built. This security model, to a large extent, is the result of drawing on the advantages of the healthcare model of the United Kingdom.The UK model has two characteristics: first, it provides free public medical care based on fairness; second, it mainly relies on community hospitals to improve the efficiency of the health care system.

The British model is actually the free National Health Service (NHS), which is one of the most important parts of the British social welfare system (Ma, 2006).The system,

covering all citizens, provides people with comprehensive and free medical services from cradle to grave based on different needs of individuals, regardless of income situation. The government is responsible for providing services like disease prevention, diagnosis, treatment and other aspects. Besides, the medical insurance system also provides patients with aftercare services, follow-up care and restorative wellness conditions as required by the NHS. Generally speaking, family doctors are responsible for the medical management of pre-registered residents and for their initial treatment.When they think that patients need special treatment or hospitalization, they will transfer patients to a general hospital for hospitalization. (Liu, Hou, Lei, Hu, Zhong, & Wang, 2002)

2.3.2.2 Market-dominated model

Medical reform in Suqian is usually taken as a representative market-dominated model in China. With insufficient government investment, the role of market mechanism should be given full play through advancing ownership reform of basic medical institutions.The market-dominated model can help optimize resource allocation,improve operational efficiency, avoid waste of resources and reduce transaction cost (Ding, 2009).In the late period of coexistence between public health services and old barefoot doctors, the government, taking the opportunity of the previous medical reform, may lower people's medical cost through market competition in order to reduce waste caused by public health and to get rid of the predicament of insufficient health care funding. As a result, referring to the market model, medical and health services may be tuned as a market-dominated model. The government intended to rely on the functions of the market to address all problems related to the medical and healthcare industry. Such market-guided public health service model largely takes the example from the American healthcare insurance model, which is the only public healthcare system that does not cover all citizens in the developed countries. Instead, both the investment channels and medical treatment are mainly provided by private organizations. Private medical insurance, apart from insurance bought by individuals themselves,mainly refers to collective health insurance voluntarily purchased by employers for employees and their family. Under such model, public hospitals and private hospitals compete equally in the medical market. The government is

only in charge of supervision and pays for the medical services of the poor and the old.

2.3.2.3 Society-guided model

In order to pursue increased fairness and efficiency, some people advocate the society-guided model, which emphasizes fair management of financing in medical care by the public, and competition and efficiency in ways of production.Financing and production are the two pillars for the society-guided model. According to the olive-shaped structure of the society-guided model, non-governmental entities play a major role in fund-raising and production whereas the government and individuals only play a minor role. (Cai, 2007).To a large extent, such model is the result of taking the German medical care model for reference. Many developed countries represented by Germany are benefiting from their medical care system,namely the universal health insurance system. Within this system, the medical security system and the healthcare service system are two independent systems. Employers and employees give payment to the third-party healthcare insurance agencies. Such healthcare insurance agencies cooperate with medical institutions(both public and private ones) to provide medical services. And the government only provide medical services to those who cannot join the program of the healthcare insurance agencies (Li, 2006). Although the government's direct expense for medical care accounts for only 10%, social health insurance pays up to 69%. Therefore, the private healthcare insurance and individuals only need to pay 11% and 10% for the medical care.From the composition of different hospitals, both public hospitals and non-profit hospitals take up 42% respectively, and profit hospitals only account for 18% (Cai, 2007).Compared with the UK model and the US model of medical care, the German model maintains a better balance between fairness of financing and efficiency of healthcare services.(Xie, 2006)

2.3.3 Concept innovation and important goals of the new healthcare reform

The new healthcare reform is aimed at ensuring that everyone has access to basic, convenient and efficient medical and healthcare services, guaranteeing fairness and efficiency, and setting up a market system with the government assuming the leadership,

and regarding fairness a bigger priority than efficiency. Upon completion of the reform, healthcare should be accessible to all citizens, equal access to basic medical services should be guaranteed for all citizens alike, and outpatient services and hospitalization for serious illnesses should be improved.

2.3.4 Purpose of the new healthcare reform

Opinions of theCentralCommitteeoftheCommunistPartyofChina and the State Council on Deepening the Healthcare System Reform (the Central Committee of the Communist Party of China & the State Council, 2009) (hereinafter referred to as the Opinions) proposed that the healthcare reform is aimed at achieving universal access to basic medical and health services and solving the problems that the people concern the most, that have direct influence on their life and the most practical ones. The reform will help maintain the public and non-profit nature of public healthcare, with emphases on disease prevention, healthcare in rural areas, and concentration on both Chinese and Western medical approaches.The reform will separate the practical services from administrative work, the operation of the healthcare agencies from the management forces, the medicine services from the consultation, and the profit agencies from the nonprofit ones. It will strengthen the government's sense of responsibility and commitment to improve national healthcare policies, better the healthcare system, supervision and management, innovate the institutional mechanisms, and encourage community-level efforts in it. The reform aims to build a basic healthcare system for citizens in both rural and urban areas, which will benefit the conditions of all people as well as the wellbeing of the public.

By 2011, the basic healthcare system had covered both urban and rural residents, the basic drug system had been set up, and the community-level healthcare system in both urban and rural areas had been further improved. All these systems are providing accessible basic public healthcare services to people. The trial reforms in public hospitals had achieved breakthroughs which largely increased the accessibility of basic healthcare services, reduced the medical expense of the citizens, and alleviated the difficulties and high cost of getting medical and health services.

The objective of the reform is to have the basic healthcare system covering both

urban and rural residents established by 2020. Such a system will include a relatively complete system of public health services and healthcare services, a sound medical security system, a normative system guaranteeing supplies of basic drugs, and a scientific system of managing and operating healthcare organizations so as to achieve diversification of hospital management and make sure everyone has access to basic medical and healthcare services. The system should be able meet people's different medical and healthcare needs, and further improve the wellbeing of the people.

2.3.5 Major measures of the new medical system reform

According to the "Opinions", major measures of the new medical system reform can be summarized as setting up "four beams and eight pillars". To be specific, setting up "four beams" means comprehensively strengthening construction of the public health service system, further improving the medical service system, accelerating establishment of the medical insurance system as well as establishing and perfecting the drug supply guarantee system. The "eight pillars" means the medical management mechanism, operation mechanism, investment mechanism, price formation mechanism, supervision mechanism, technology and intellectual support, information system and legal institutions. (CPC Central Committee and the State Council, 2009)

Strengthen construction of the public health service system: To begin with, a professional public health service network, covering disease prevention and control, health education, maternal and children health care, mental health, emergency treatment, blood collection and supply, health supervision and family planning, should be set up and improved(State council, 2012). Besides, the scope of service of public health should be determined; basic public health service programs of the country should be specified and new service items should be added gradually; and the role of traditional Chinese medicine in disease prevention and control, response to public health emergencies and medical services should be brought into full play(Ren, 2009). Moreover, the new urban medical health service system based on community health services should be more inclusive, providing public health services such as disease prevention and control, primary treatment

of common diseases and frequently-occurring diseases as well as management and rehabilitation of chronic diseases, so that it can gradually shoulder the responsibility as the "gatekeeper" of citizens' health(Xinhua Health). Finally, effective ways of integrating resources of public health service should be explored in order to better the urban-rural emergency medical treatment system; health promotion and education should be enhanced; patriotic health campaigns should be launched; and health supervision should be strengthened (NetEase Finance, 2009).

Further improve the medical service system: The principles of keeping non-profit medical institutions in a dominant position and having profit-making medical institutions develop side by side, and that of relying mainly on public medical institutions for development and allowing non-profit medical institutions to develop at the same time should be adhered to(Ministry of Health, 2012). The rural medical health service system should be vigorously developed. The government should regard construction of county-level hospitals as a priority, build a health center in every village and town, adopt various forms to support the construction of village clinics to ensure that there is a clinic in every administrative village, and significantly improve rural health conditions and enhance medical service quality. County-level hospitals, as medical and health centers within county regions, are mainly responsible for providing basic medical services and rescuing patients of acute diseases and those in critical conditions. They are also obliged to provide business and technical guidance to township health centers and village clinics, and further education and training to health personnel (NetEase Finance, 2009).

The functions and responsibilities of various hospitals should be brought into full play. Large hospitals with the necessary conditions can promote sound flow of medical resources in the form of trusteeship and reorganization in accordance with regional health planning. A system characterized by urban hospitals providing partner assistance to rural medical and health institutions should be set up. To be specific, urban hospitals can help enhance the medical level and service capacity of rural medical institutions in such forms as clinic services, personnel training, technical guidance and equipment support. In this way, a pattern characterized by community health centers providing primary treatment,

hospitals of different levels dealing with cases of different difficulty and a two-way referral system between urban hospitals and rural hospitals will gradually be formed (State council, 2012).

Accelerate establishment of the medical insurance system: A basic medical guarantee system formed by a basic medical guarantee system covering both rural and urban residents, a basic medical insurance system for urban workers, a basic medical insurance for urban and township residents, a new rural cooperative medical system and a rural-urban medical assistance system should be put in place. Priority shall be shifted from guaranteeing the treatment of serious illnesses to extension of medical services to treatment of minor diseases, so as to constantly improve the guarantee level. The level of fund-raising and overall consideration should be enhanced so as to bridge the gap of guarantee between different medical institutions and ultimately arrive at a uniform institution and framework (Song, 2009). In 2009, basic medical insurance for urban and township residents was fully carried out, and the new rural cooperative medical system was thoroughly implemented; connection between basic medical insurance system for urban and township workers, basic medical insurance system for urban and township residents, new rural cooperative medical system and rural-urban medical assistance system has been ensured; and business health insurance has been developing with sound momentum(Deng, 2009).

Establish and perfect drug supply guarantee system: A national basic drug system should be set up and basic drug list be created. Public bidding and procurement and unified distribution for basic drugs should be carried out in accordance with the principles of prevention and treatment, safety and effectiveness, reasonable prices, convenience of usage, and equal emphasis on traditional Chinese medicine and Western medicine, so as to reduce intermediate links and guarantee supply of basic drugs for the general public (Baidu Encyclopedia, 2009). Basic medical and health institutions in both rural and urban areas should be equipped with and use basic drugs. Basic pharmaceuticals should all be included in the pharmaceutical benefits scheme of basic medical guarantee with a

significantly higher reimbursement ratio than non-basic pharmaceuticals. Besides, production and circulation of pharmaceuticals should be regulated.

Set up a coordinated and unified medical and healthcare management system: Management within the specific region and that of the whole industry should be implemented. Regional health planning should be strengthened. The provincial people's government should be responsible for formulating health resources allocation standards, strictly controlling allocation of large medical equipment, and establishing regional health planning and resource distribution, supervision and evaluation mechanisms(Cheng,2009). Health and administrative departments should primarily perform industry management functions such as formulation of development plans, qualification system for access, regulation standards and service supervisions. In addition, the basic medical insurance management system should be further improved(State Council, 2012).

Build a high-efficiency and regulated operation mechanism for medical and healthcare institutions: Revenue of public health institutions should all be included in budget management; operating mechanism for basic medical health institutions should be transformed. Financial management measures such as verification of tasks, revenue and expenditure and performance appraisal subsidies should be implemented. And various effective management methods such as separation between revenue and expenditure as well global budget for public health and medical guarantee should be explored and implemented; a regulated public hospital operating mechanism should be set up. A hospital corporate governance structure should be established and bettered with the responsibilities and rights of owners and managers clearly specified so as to achieve checks and balances of decision-making, execution and supervision. The pharmaceutical markup policy should be gradually reformed or abolished through various means such as price mark-up for purchase and sale of pharmaceuticals and collection of medicine service fees. The public hospital compensation mechanism should be perfected through measures such as moderately adjusted medical service process, increased government investment and reformed methods of payment; And the operating mechanism for medical insurance

agencies should be optimized(CPC CentralCommittee & State Council,2009).

Establish a government-led health investment mechanism characterized by diverse sources of investment: It is necessary to ensure that the government plays a leading role in providing public health and basic medical services. Public health service are mainly funded by the government with the aim of serving both urban and rural residents. The medical fees of basic medical services are shared by the government, society and individuals, whereas the fees for special medical services are paid directly by the individual or by commercial health insurance (Chen, 2007). A government-led health investment mechanism should be established with no discrimination between the supply side and the demand side in investment. In addition, growth in government health spending should be higher than that in recurrent fiscal expenditure (Ministry of Finance, 2009); responsibilities shouldered by central and local governments in health investment should be made clear on a hierarchical basis; the government-led health investment mechanism should be improved; a mechanism for government to invest in community-level medical and health care institutions should be improved. These institutions can receive government subsidies through the purchase of services, thus changing their situation from “pay the staff to work” to “work to pay the staff”; the policy of providing government subsidies to public hospitals should be implemented. Government investment should be prioritized to TCM hospitals (ethnic hospitals), hospitals for infectious diseases, mental hospitals, occupational disease prevention hospitals, maternity hospitals and children's hospitals; the mechanism for government to invest in basic medical security should be improved; social capital is encouraged to enter medical and health care industry to facilitate development of non-public medical institutions. The investors and investing ways of hospitals should be diversified. The proportion of public medical institutions will be lowered moderately (Jiang,2011). Great efforts should be made to develop medical charity. To be specific, relevant preferential policies will be formulated; social forces will be encouraged to set up medical charity organizations or make some charitable distributions to medical treatment and medical institutions(Xinhua News Agency,2009).

Build a scientific and reasonable price formation system for pharmaceuticals: Administration in medical service prices should be standardized. Non-profit medical institutions should follow the government guided-price in basic medical services, whereas in other services, they shall have discretion of pricing. Tiered pricing can be used to charge services offered by different doctors and medical institutions at different levels. On the basis of reforming drug price mechanism, adjusting government guidance price reasonably and improving drug pricing method. Taking advantage of price leverage, enterprises will be encouraged to innovate independently. The production and use of national essential drugs will be greatly promoted.

Set up a strict and effective medical and healthcare supervision system: Medical and health supervision should be strengthened, with supervision of both practices and quality of medical and health services be strictly supervised; supervision of medical insurance should be bettered; regulation of pharmaceuticals should be strengthened; and a supervision system characterized by information disclosure and social participation by multiple parties should be set up.(Zeng, 2010)

Establish a sustainable technological innovation mechanism for medical and healthcare services and a human resource guarantee mechanism: Technological advancements should be made in the medical and healthcare industries; development of medical and healthcare professionals should be strengthened. A regulated training system for resident doctors should be put in place. And multi-sited license of registered doctors should be studied and explored; the structure and scale of higher medical education should be adjusted, healthy and harmonious doctor-patient relations be fostered, and cultivation of humanistic quality and education of professional quality of medical personnel be prioritized(Zhao, 2010).

Build a practical and shared medical and healthcare information system:

Disease-control-network dominated public health information system should be perfected and its capacity in forecasting, early warning, and report analysis should be well improved.

Countryside and community health information network platform which focus on resident health files should be established. Taking hospital management and electronic medical records as priority, hospital information construction should be actively boosted. Taking advantage of network information system, cooperation between urban hospitals and community health service institutions should be greatly accelerated. In the meantime, long-distance medical face to rural and remote areas should be zealously developed (Xinhua News Agency, 2009).

Establish and improve the medical and healthcare laws and regulations: Formation of basic medical and healthcare laws should be accelerated. Specifically, to clarify the rights and obligations of government, society and citizens in perspective of health promotion. In consequence, everyone will enjoy basic health and medical services. In addition, health standard system should be established and bettered. To be specific, relevant laws and regulations should be well connected and coordinated. The traditional Chinese medicine legislative work should be accelerated. Drug regulatory laws and regulations should be perfected. A complete health legal system which adapt to basic healthcare system should be gradually established and bettered.

What's more, law should be enforced in a strict, formal way. By exerting legal means, to effectively improve governments' capacity in medical development and management. Health law should be greatly popularized, so that a healthy legal environment can be well built (CPC Central Committee, & State Council, 2009).

2.3.6 Highlights and challenges of the new medical reform

Revenue generated from drugs takes up around 43% of the Hospital's total revenue. (See 2.2.2.2) The first challenge in the new medical reform is to change the practice of generating hospital revenue from drugs and make sure that public hospitals serve the public good. It is necessary to establish a government-led multi-level healthcare investment mechanism to provide the government-suggested price for basic medical services in non-profit medical institutions so as to push forward diagnosis-medicine separation. To reform current mechanism, a variety of effective ways should be actively

investigated. For instance, setting different prices for drug purchase and sale, charging pharmacy service fee and other means to gradually reform or abolish drug price addition policy. At the same time, adopting measures like adjust medical service price, increase government investment, and reform payment pattern to better public hospital compensation mechanism.As a result, the problem that benefiting the hospital from drug sales can be gradually resolved (Wu, 2009).

The second is to promote the basic public healthcare services covering rural and urban residents.The dual development of urban and rural areas has led to the imbalanced development of medical services and medical resources in urban and rural areas. The medical and healthcare services in village and community-level institutions are rather weak.According to the new reform, China has been providing unified medical services to urban and rural residents in disease prevention and control, maternal and children healthcare and health education since 2009. In 2009, the standard for minimum average public healthcare expense is fifteen yuan. And in 2011, the standard raised to twenty yuan(CPC Central Committee, & State Council, 2009).

The third is to strengthen the protection of access to medical services of the vulnerable groups so as to live up to the fairness of the healthcare reform.The new reform plan especially reinforces the insurance of migrant workers, the old, women, children in rural areas, bankrupted workers and retirees, with special focus on rural areas. The new medical system reform highlights fairness and intends to enhance the fairness of health investment and the accessibility of basic health service to urban and rural residents by .increasing government's health investment, perfecting basic insurance system, building basic system of national drugs and equalizing essential basic health service(Chen, 2011).

2.4 Opportunities and challenges for county-level hospitals in the new healthcare reform

2.4.1 Status of county-level hospitals in the new healthcare reform

County-level hospitals in China take up 90% of the total number of hospitals, providing

medical and healthcare services for 70% of the country's population, which is nearly 900 million people (Mu, 2013). These hospitals play a dominant role in public hospitals. But they are also weak in some aspects(Ma, 2012). Therefore, they are critical in determining the success of the comprehensive reform of public hospitals. County-level hospitals have different focus compared with urban hospitals in terms of function, structure and services.The development of county-level hospitals is closely related with the reform of township hospitals. And county-level hospitals have relatively simpler service system, internal management system and compensation mechanism than urban hospitals.

The reform of county hospital is key to the medical and healthcare insurance system.The medical capacity, medical charges and facilities of county-level hospitals are the focus of China's healthcare reform. Only with improved county-level hospitals, which are also the key of the medical security system, can the masses enjoy better medical treatment.

2.4.2 Situation of county-level hospitals under the new healthcare reform

Further encourage and improve the compensation mechanism.Relevant government departments at all levels should continue to encourage implementation of the healthcare reform policies of new county-level hospitals and gradually change the situation of benefiting the hospitals by drug sales.

Identify functions and optimize allocation of resources. County-level hospitals are an important part of the healthcare reform. Only with the increase of people's trust in and satisfaction with county-level hospitals can the situation of patient outflow get changed and the difficulty to access medical services be solved(Li, 2012). Meanwhile, county-level hospitals should establish and strengthen the management of health records of local citizens, actively educate people of healthcare knowledge with emphases of key groups and key places, standardize public healthcare services such as vaccination, and improve the overall basic-level healthcare system.

More efficient and better medical and healthcare services should be provided with urban and county-level hospitals taking the leading role in urban and rural areas respectively the establishment of vertically integrated medical cooperatives and groups,

and unified management of county-level hospitals and rural hospitals(Yang, Wu, Su, Xiao, Yang, & Zhao, 2012).

Attract competent professionals and improve the processional ability of medical teams.It calls for a mid-term and long-term comprehensive planning to construct a talent training mechanism covering pre-job training, on-the-job training, degree education, specific training and research to improve the expertise of medical technicians.At the same time, measures should be taken to send more healthcare workers and administrative staff to receive training abroad.

Innovate mechanisms and improve service capacity.The levels of healthcare capacity directly determine the breadth and depth of the medical and healthcare reform. Only through innovations of the management mechanism can county-level hospitals realize the genuine reform goals.

Share resources with large scale hospitals to complete each other's advantages.County-level hospitals can take advantage of the technology, personnel and equipment from large hospitals, and large hospitals can directly reach the residents and get more information about them via county-level hospitals.

Such complementation can also be used in basic level healthcare reforms, such as setting up a combined specialist consultation department with famous specialists from municipal and provincial hospitals. After such reform, patients would go to county-level hospitals first and then to the combined consultation department. Besides, with the combined consultation set in county-level hospitals, people can enjoy more sound medical and healthcare services at the basic level hospitals.

Establish public hospital management committee, public hospital supervision committee and public hospital evaluation committee.Via standardized and meticulous management of single disease,hospitals can effectively control their medical cost.With clinical trial, consultation and treatment standard, the reform will guide the medical and healthcare workers to reasonable examination, proper treatment and rational drug use, so as to improve the medical quality and reduce medical cost (Economic Information Daily, 2012).

2.4.3 Development opportunities for county-level hospitals under the new healthcare reform

"The Guidance" points out that it is crucial to vigorously develop the rural health service system and further improve the health service network with county-level hospitals taking the leading role and township hospitals and village clinics functioning as the basis.Under the new healthcare reform, county-level hospitals are positioned as the leader of the county-level healthcare system, which indicates that the status and function of county-level hospitals have been raised and identifies the policy-making perspective for the development(Chen, 2012).

Under the new healthcare reform, the government encourages and guides more social capital into the healthcare industry and encourages charitable donations to medical institutions in addition to increasing spending and the compensation polices for public hospitals. As a result,investment from the central government, local governments and non-governmental resources are all introduced into hospitals, contributing to the development of county-level hospitals.

During the National Conference on Medical and Healthcare Reform in 2008, it was pointed out that as the center of medical services in the county, county-level hospitals should be further strengthened of quality and expanded of scope. Thus people can get non-critical illnesses cured within their own village and critical illnesses treated within their own county. County-level hospitals will guide and support the training of staff from township and village hospitals. Therefore, it is a must to increase the share of medical and healthcare resources allocated to county-level hospitals.

Under the new healthcare reform programme, China will focus on the basic medical security system and other four healthcare reforms. More than 90% of the working and non-working urban residents under the medical insurance system and rural residents under the new rural cooperative medical system will be covered by healthcare insurance within three years. In 2010, the government subsidy on basic public health services under the medical insurance system and the new rural cooperative insurance system reached 120 per person, with appropriate increase of individual contributions, the reimbursement ratio and the payment limit(China News, 2009).

According to the Guidance, a comprehensive basic medical and healthcare system will be set up within three years with county-level hospitals playing the leading role. The operation mechanism and service model of county-level hospitals will be transformed and the compensation mechanism improved. In 2009, the central government granted about 45 billion yuan to improve the basic healthcare system with eighteen million yuan granted to every single county-level hospital.

2.4.4 Challenges for county-level hospitals under the new healthcare reform

2.4.4.1 Competition in the medical market

Since the new healthcare reform was launched, major hospitals in big cities have began and will continue to expand on their original sound basis, and those hospitals in towns and villages, as well as community health agencies have also participated and will continue to participate in competition of the medical market with support from the government. Currently, with support from the government, development of non-public healthcare institutions are gaining momentum. They will become a formidable rival of public hospitals(Ministry of Health, 2012).

2.4.4.2 Lack of government investment and subsidy

The subsidy system is a basic system aimed at maintaining the commonweal nature of public hospitals (Zhu, 2012). Since the healthcare reform was initiated, government investment in public hospitals has still been insufficient. The medical treatment subsidy system is yet to be improved, and the medical charge management system is rigid and lagging. For example, items that are to be charged are not reasonably arranged; prices of some hygienic materials are not properly determined; and the price of the technical service does not justify its value. County-level hospitals are serving the majority of people, shouldering large medical expenses with little profit, which actually increases the operating cost of hospitals. Default of the unidentified and the poor patients adds more burden to such hospitals(He, Zhang, Yan & Li, 2007).

2.4.4.3 Internal factors hindering the development of hospitals

Internal factors that hinder the development of hospitals are diverse. Some of the major ones include management,personnel and equipment(Jiang, 2011). The medical industry is

a knowledge-intensive one. A strong workforce, with both technical and management professionals, is key to its development. Nowadays, county-level hospitals are faced with a shortage of competent medical staff as well as brain drain of medical talents. Due to the lack of resources and financial support, it is hard for county-level hospitals to purchase advanced large-scale medical equipment. This has hindered the development of their technical projects.

Healthcare reform is an issue that affects both the development of the nation and the wellbeing of every citizen. It is a major research subject for the leadership of medical and healthcare system. The new healthcare reform program has three major approaches, namely, enlarging the coverage of medical insurance to all citizens, encouraging development of non-governmental medical institutions with diversified investment and separation of administration and business of public hospitals. With the deepening of the medical reform, state-owned public hospitals will face more challenges in the future.

2.4.4.4 Challenges of controlling the operating cost of hospitals

Since the late 1980s and the early 1990s, the state-owned public hospitals have conducted internal cost accounting to different extents, such as the cost accounting for single projects as well as the cost accounting for single illness and multiple diseases. Such cost accountings cannot only help better meet the medical needs of the general public by lowing prices of medical services, but also further arouse the initiative of hospital staff and increase economic efficiency (Luo,2008). However, such accounting system set up by non-professional institutions are not able to help avoid waste of medical resources at both macro and micro levels. To be specific, at the macro level unscientific investment has been made across different regions; at the micro level, there have been blind expansion and repeated construction of large-scale state-owned public hospitals. All these new systems, regulations and measures that are to be introduced should not only assess performance of managers and operators of public hospitals in a more clear and regulated manner, but also more effectively avoid waste of medical resources and introduce more effective quantification standards for social benefits and economic benefits.

2.4.4.5 Challenges from market competition

The new healthcare reform program has three major approaches, namely, enlarging the coverage of medical insurance to all citizens, encouraging development of non-governmental medical institutions with diversified investment and separation of administration and business of public hospitals.

After the implementation of the new medical reform, the government started to appropriate fund to buy basic healthcare service for the public through basic healthcare service programs. Those in charge of the programs will receive corresponding fund. Besides, individuals should pay for the medical services they receive. In the past, the government adopted a welfare policy though hospitals.Now it uses transfer payment to directly provide money to the underprivileged who can then choose to buy the services provided by medical institutions. This new model helps to not only meet the needs of patients, but also avoid excessive treatment, exorbitant charge of medical fees and profit-oriented medical trend.

China encourages the development of private hospitals. Various sources of private capitals have been used to establish medical institutions of many forms like sole proprietorship, joint venture, cooperation and project financing. Currently, there have appeared a series of private general hospitals established with a large scale of investment like Dongguan Kanghua Hospital, Shenzhen Binhai Hospital, Nantong Cirui Hospital, Suzhou Jiulong Hospital and Taizhou Puji Hospital. An investment pattern characterized by diversification of main investors has been put in place, which will speed up the competition of the medical market.

At present, most public hospitals in China adopt a management pattern of “unified management and operation”. However, the revenue of hospitals comes mainly from their own operation rather than the government budget, which means they have a high degree of economic independence. If the management of public hospitals can be handed over to an enterprising hospital or group, they will be able to enhance their operation efficiency and better satisfy the needs of patients.

2.4.4.6 Challenges from both governmental and private regulatory organizations

Under the new healthcare reform, public hospitals will separate management from operation (one step of transforming the state-owned public hospitals into corporate entities). Such separation does not mean forsaking the pursuit of benefits or withdrawing from competition but transforming the rights to management and operation from the management team composed of medical experts to that of medical experts. This can help bring the expertise of professionals to full play as well as avoid the inefficiencies of management and mistakes in decision-making. The separation puts the non-profit state-owned public hospitals under the continuous supervision from both internal and external organizations with emphasis on dynamic and real-time control of the programme.

In addition, an enterprise, as an organic whole, should fully arouse the initiative of employees of every department to lower cost.

2.5 Conclusion

The aim of the healthcare reform is not just to reduce prices of medical services, but more importantly, to find out a medical system which best suits China's characteristics. The medical industry is aimed at making profits like other players in the market economy on the one hand, and serving the public good like social welfare institutions on the other hand. While the financial expenses on fixed assets,large equipment,network equipment, medical cost of poor patients are paid by the government, the rest are all determined by the market. The government has formulated strict regulations for the management and supervision of the industry. These regulations are intended to not only cut down medical cost to an appropriate level but also avoid the unreasonable high or low prices for consultation and operation. The Guideline on Medical and Healthcare Work in 2012 (Ministry of Health, 2012) strengthens the medical reform of county-level hospitals which is the core part of the medical reform. County-level hospitals are large in number and provide medical services to the majority of Chinese citizens. They are positioned at the center of China's medical system, below provincial and municipal hospitals and above township hospitals. On the medical resource pyramid, large urban hospitals, which are the smallest in number, occupies the best resources. Patients are used to visiting these large hospitals regardless of

the severity of their diseases. This has added to the burdens of these highest quality hospitals (Level-Three hospitals including Level-Three Grade-A hospitals) which ought to focus only on serious and complicated illnesses. The grading system of hospitals will help improve the service capacity and efficiency, and ensure more people have access to medical services. Therefore,the medical and healthcare reform in county-level hospitals would be very important for the grading system of hospitals.

Chapter 3: Research Methods

This chapter describes the ways of accessing data, the means used to analyze the data and the structure of the research.

3.1 Research design

This dissertation is based on a case study of Ronggui Hospital. The internal and external environment as well as competition strategies of Ronggui Hospital are studied on the basis of collecting and reviewing comments issued by the press and papers published by scholars on the reform of county-level hospitals, analyzing the background, major policies and effects of the new healthcare reform as well as concluding and analyzing challenges and opportunities of county-level hospitals with relevant management theories. Strategic thought and specific measures of differential market competition strategy are proposed for the Hospital to stand out from fierce competition and serves as a good example for the development of county-level hospitals in the context of the new healthcare reform.

3.2 Data collection

In July 2012, 200 questionnaires were distributed to patients of Ronggui Hospital to collect their basic information and their satisfaction degree, with 187 questionnaires recollected; 200 questionnaires were distributed to staff of Ronggui Hospital to collect their basic information and satisfaction degree, with 194 questionnaires recollected.

In June 2012, questionnaires were distributed to collect basic information about Ronggui Hospital, composition of hospital staff, current situation of each department, development indicator for department staff, top ten causes of diseases in Ronggui Hospital, top ten causes of diseases in Ronggui, top ten causes of death in Ronggui and fixed assets of each department in Ronggui Hospital.

The subject director collected information about geographical, social and economic conditions of Ronggui, health conditions and residents' needs of healthcare service in Ronggui as well as social and healthcare insurance with the help of the Health Bureau and the Statistical Department.

In May 2012, subject members interviewed dean of Ronggui Hospital, vice dean of Ronggui Hospital, senior officials of Ronggui Hospital, expert and employee representatives of Ronggui Hospital, vice director of Shunde district, director of the Health Bureau of Shunde district, vice director of the Health Bureau of Shunde district, director of the Health Bureau of Foshan city and vice director of the Health Bureau of Foshan city on topics related to the role of Ronggui Hospital in Foshan city, advantages and characteristics of Ronggui Hospital, the weaknesses of Ronggui Hospital, key factors advancing the development of Ronggui Hospital, type and characteristics of people served by Ronggui Hospital, factors hindering the development of Ronggui Hospital and proposals and suggestions for the development of Ronggui Hospital during the Twelfth Five-Year Plan period respectively. One-to-one interview was carried out with dean of Ronggui Hospital, vice director of Shunde district, director of the Health Bureau of Foshan city and vice director of the Health Bureau of Foshan city and Mr. Liao Xinbo, vice director of Guangdong Health Department. Focus group interview was carried out with vice dean of Ronggui Hospital, senior officials of Ronggui Hospital, expert and employee representatives of Ronggui Hospital.

Field trip was taken to observe if the equipment, diagnosis and treatment environment and hospital system and culture are in compliance with the Accreditation Standards for Grade-III Comprehensive Hospitals and the Accreditation Standards and Principles for Grade III Comprehensive Hospitals in Guangdong Province.

3.3 Data analysis

The linear extrapolation method is employed for predicting business data for the Hospital.

Documentary methods are employed to review literature and identify research orientation.

Porter' s Five Forces Theory (Michael Porter, 2005) is employed for analyzing competition of healthcare and medical services in China and identifying the possibility of implementation in healthcare market competition.

Case study is conducted to introduce the Hospital from the perspectives of scale, staff, equipment, operation and management. Results collected from questionnaires and

interviews are employed for the analysis of competition strategy of the Hospital.

Trend analysis method is employed to conduct microscopic environment analysis in terms of policy trend, economic trend, social trend and technological trend.

SWOT analysis is used to analyze advantages, disadvantages and threats of hospitals so as to have a good knowledge of the current competition and help the Hospital integrate resources and identify strategic direction.

Competitive strategy analysis and BCG matrix analysis are conducted to establish market competition strategy for the Hospital in accordance with competition situation and internal conditions.

Brainstorming and BSC are employed for specifying measures of formulating market competition strategy, establishing incentive mechanism and changing or adjusting organizational structure, hospital culture and marketing strategies so as to promote the implementation of market strategies and enhance its effects.

Chapter 4: Choice and Implementation of Hospital Strategies

By introducing the environment of Ronggui Hospital, the author uses relevant management theories to analyze the internal and external environment and choice of competition strategy of hospitals. Besides, the author proposes a strategic thinking of differentiated competition and how to implement it.

4.1 Environment analysis of Ronggui Hospital

With four hundred allocated beds and comprehensive secondary departments, Ronggui Hospital is a 2A general public hospital integrating services of ordinary medical treatment, emergency treatment, medical education, medical research, disease prevention, healthcare and rehabilitation. Meanwhile, a new Ronggui Hospital funded by the Ronggui Government is under construction at a different place. According to the plan, the new hospital that will be put into operation in the year of 2014 will be equipped with eight hundred beds and will be qualified as a 3A general hospital. .

With the development of a new round of healthcare system reform, hospitals will meet more opportunities and challenges. Ronggui Hospital should respond to requirements of the fundamental policy of our country and find out a way to maintain its advantages in face of challenges and to stand out in fierce competition. Instructed and led by governments at all levels, Ronggui Hospital should take into consideration the socio-economic development of Ronggui and people's needs for healthcare. It is a major issue of livelihoods concerned by the government, hospitals and general public for Ronggui Hospital to transform challenges into opportunities, make timely plans, identify positioning and strategies for future development, ensure a sustainable development for the Hospital and provide better medical and healthcare service for residents in Ronggui and neighboring areas.

4.1.1 Socio-economic development of Ronggui

Ronggui, an important neighborhood in the downtown area of Shunde District, is located at the hinterland of the Pearl River Delta. It is close to Hong Kong and Macao, with Shenzhen on the Southeast and Guangzhou on the North. It is called “the No.1 town in the Chinese mainland” and is also known as “the hometown of culture”. It has five pillar industries: smart electric appliances, information electronics, medication and healthcare, fine chemical industry and machinery molds. Ronggui encompasses eighty square kilometers and rules over 23 residential committees and three village committees. The number of permanent residents in 2011 stood at 465 thousand with a natural population growth rate of 4.81‰. Statistics show that during the Eleventh Five Year Plan period, the GDP of Ronggui experienced sound and fast development with an annual growth rate of 14%. By the end of 2010, the GDP of Ronggui was around 37.59 billion yuan with per capita GDP standing at 827 thousand yuan. The annual per capita disposable income of urban residents reached 306,180 yuan and the annual per capita disposable income of rural residents was up to 9,842 yuan. Compared with the year of 2005, these four figures increased by 101.94%, 80.52%, 47.01% and 59.82% respectively.

Improving people’s health level is one of the major goals of the socio-economic development of any society. People’s health level and socio-economic development influence each other. With the continuous development of society and economy, demands of healthcare from the general public are constantly increasing. According to statistics, the health status of residents in Ronggui area was improved significantly from 2005 to 2010. It can be testified from the continuous decline of infant mortality rate, maternal mortality rate and mortality rate of children under the age of five. Besides, statistics also show that growth of residents’ medical expenses has exceeded that of their income.

Faced with fierce competition in the healthcare market and urgent needs of healthcare services from the public, a hospital must not only have the internal pressure needed for sustainable development, but more importantly a development plan that meets demands of the healthcare market and creates new competitive edges and operation models in a homogeneous competition environment.

4.1.2 General information of Ronggui Hospital

Ronggui Hospital of Shunde District was first constructed in 1958. It is located in Ronggui which enjoys titles of “Famous Chinese Town”, “Famous Chinese Town of Bonsai” and “A Town with A Hundred Billion GDP”. The hospital was rated as a 2A general hospital in 1991. As the first township 2A hospital in China, Ronggui Hospital attracted a lot of talents nationwide. Over fifty years of development, it has become a general public hospital integrating services of ordinary medical treatment, emergency treatment, medical education, medical research, disease prevention, healthcare and rehabilitation. It is also granted the title of baby-friendly hospital and is one of the one hundred leading hospitals in Guangdong Province. Apart from these, Ronggui Hospital is the only healthcare institution qualified to conduct occupational health examination in Ronggui, the base for clinical research of trauma surgery of Guangdong Scientific Research Center of Trauma Treatment, the teaching hospital of Guangdong medical colleges and universities and the designated hospital for Zhongshan residents to cover medical expense by medical insurance.

Ronggui Hospital covers an area of 30,000 square meters with 400 authorized beds but 490 beds in actual use. It has 809 employees among whom 379 are permanent while the other 412 are contracted. What’s more, 73 of the employees have senior professional titles, 134 have intermediate professional titles and 34 have postgraduate degrees. The total hospital revenue in 2011 was 299 million yuan. The total number of outpatient and emergency visits was 2,044,000 and the total number of inpatients reached 16,700. Ronggui Hospital now has 21 clinical departments: Internal Medicine Department (4 clinical zones), Surgical Department (4 clinical zones), Department of Gynecology, Obstetrics, Pediatrics, NHO, Ophthalmology, Emergency Department, Western Medicine Outpatient Department, Dermatology, Stomatology Department, Department of Physical Examination, Chinese Medicine Outpatient Department, Dermatology and TD Department, Disease Prevention and Healthcare Department, Department of Pathology, Functional Department, Radiological Department, Pharmacy Department, Laboratory Department, Department of Anesthesiology. The Hospital also sets up administrative departments such as General Office, Human Resource Department, Financial Department, Medical Affairs

Department, Information Service Department and Logistics Department. Among all the departments, the Diabetes Special Department, Respiratory Special Department, Cardiovascular Special Department, Cavity Mirror Special Department and Orthopedics Department are the specialized departments of Ronggui Hospital. It is also equipped with various advanced medical equipment worthy of more than seventy million yuan. These equipment can basically meet people's medical demands.

Ronggui Hospital, always taking "keeping doctor-patient in harmony, benefiting all families" as its purpose and "providing patient-centered, standard, safe, qualified and efficient services" as its management objective, constantly strengthens the staff's awareness of service and continuously improves its medical and nursing services. Therefore, Ronggui Hospital has built up a good public image and won itself widespread praise from society.

4.1.3 Analysis on allocation of medical resources in Ronggui Hospital

(1) Staff Structure

The number of staff: the total number of staff was 645 in 2006 and 809 in 2011, with an average annual growth rate of 4.18%. But generally the staff scale has been slightly declining in the last three years. The number of staff of 2011 decreased by 1.6% compared with that of 2010. The total number of permanent staff was 297 in 2006 and 397 in 2011 with an average annual growth rate of 4.98%. The number of permanent staff reached its peak at 2009 with 405 in total. Compared with this figure, the number in 2011 declined by1.98%. However, in 2011, the staff scale of Ronggui Hospital is still larger than the average staff scale of other Level-Two general hospitals in Guangdong. This shows that Ronggui Hospital, though experienced a decline of the number of medical personnel, still has comparative advantages. Yet, there is still a large gap between Ronggui Hospital and Level-Three hospitals in Guangdong in terms of the staff scale(See Table4-1 and Table4-2)

Table 4-1 Number of Permanent Staff and Contracted Workers (2006-2011) (Source: Annual Financial Statement of Ronggui Hospital)

Indicator(person)	2006	2007	2008	2009	2010	2011
Total Number of Staff	645	711	773	817	822	809
Permanent Staff	297	327	371	405	395	397
Contracted Workers	348	384	402	412	427	412

Table 4-2 Comparison of the Number of Staff of Ronggui Hospital with the Average Number of Staff of other Level-Two and Level-Three Hospitals in Guangdong (2011)

	Ronggui Hospital	Average Number of Level-Two Hospitals	Average Number of Level-Three Hospitals
Number of Staff(person)	809	304	1437

Note: the average number of staff of Level-Two hospitals and that of Level-Three hospitals in Guangdong are calculated according to the statistics published in the *Annual Health Statistic Yearbook of Guangdong 2011* or by consulting the Guangdong Health Department. In order to make sure that the data used are from the same period of time, the data of Ronggui Hospital used here are also of 2011. It is the same with the following related tables.

The staff distribution structure: from 2006 to 2011, the number of medical technicians and that of certified (assistant) doctors in Ronggui Hospital first increase and then decrease. The number of these two groups of staff rises to 629 and 213 in 2010 from 473 and 152 in 2006, and then declines to 619 and 204 in 2011. Compared with 2006, the number of medical technicians in 2011 increased by 30.87% with an average annual growth rate of 5.53%. Medical technicians account for 76.5% of the total staff in 2011, slightly higher than the national standard of the Level-Two hospitals (75%), but lower than the average standard of the Level-Two hospitals in Guangdong province (81%). The ratio of doctors to nurses was 1:1.4, lower than the standard of 1:2 required by the Hierarchical Management Standards of General Hospitals. In 2011, the number of medical technicians, certified (assistant) doctors and certified nurses is way above the average of Level-Two hospitals in Guangdong, but there still exists a large gap with Level-Three hospitals in this respect (Table 4-3).

The structure of professional titles of staff: the hospital's lack of well-educated and highly-competent talents requires optimization of the academic structure of the staff. Currently, the number of staff with a junior college degree accounts for the most (37.1%), the number of staff with a bachelor's degree accounts for the second most (33.8%). In 2011, the only doctor with a PhD degree left the hospital. Thirty-four doctors have master's degrees, making up 4.2% of the total staff. As for medical technicians, in 2011, staff who got a junior college degree took the largest proportion of 43.4%, and staff with a postgraduate degree accounts for 5.1%, a little higher than the average level of 4.7% in Guangdong, but lower than the average of 7.2% in the Pearl River Delta area. The ratio of staff with different professional titles (senior professional, associate senior professional, intermediate, primary) is 1:7.5:15.4:47.8. Compared with the ratio required by the Hierarchical Management Standards of General Hospitals of 1:2:4:8, the ratio of staff with senior professional titles is a little lower than the ratio required (1.3%), a little higher than the average of Foshan (1.1%), but lower than the average of Guangdong province and that of the Pearl River Delta. The above analysis indicates that the structure of professional titles needs to be improved in Ronggui Hospital (Figure4-1)

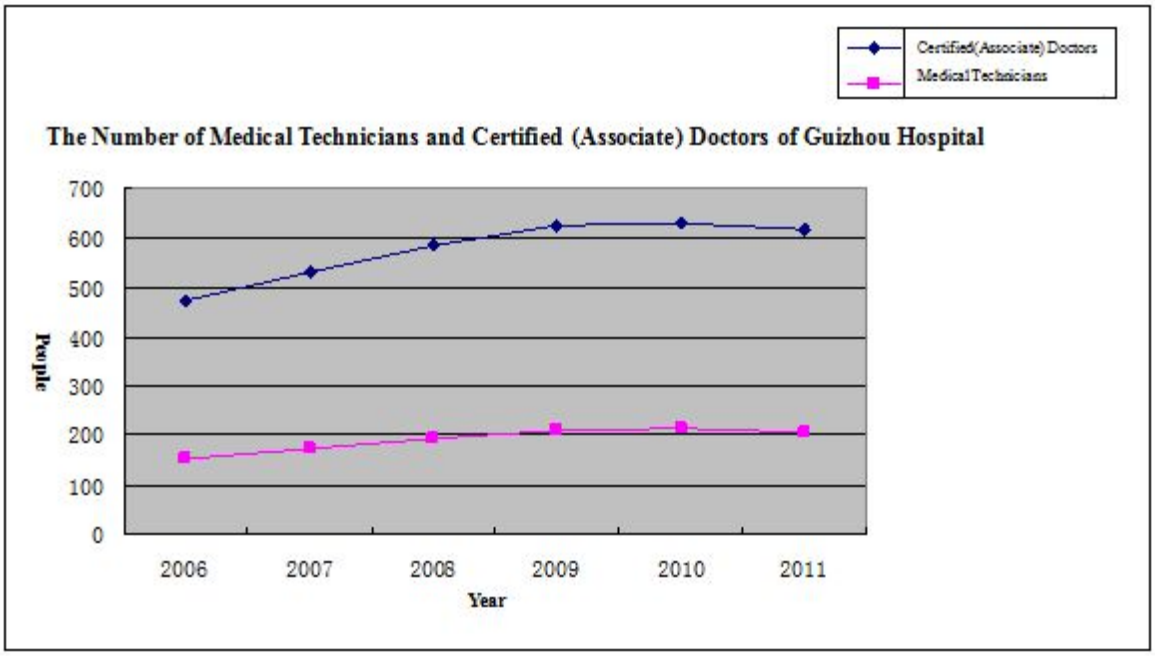

Figure 4-1 The Number of Medical Technicians and Certified(Associate) Doctors of Guizhou Hospital

Table 4-3 Current Staff Structure of Ronggui Hospital and the Staff Structure of Level-Two and Level-Three Hospitals in Guangdong (2011) (person)

Indicator	Ronggui Hospital	Average Number of Level-Two Hospitals	Average Number of Level-Three Hospitals
Number of Medical Technicians	619	285	1194
Certified (Associate) Doctors	204	99	387
Certified Nurses	292	120	555
Pharmaceutical Personnel	50	21	71
Laboratory Personnel	22	11	42
Radiology Personnel	8	4	19
Other Medical Technicians	11	30	119

Table 4-4 Professional Title Structure of Medical Technicians in Ronggui Hospital and that of the Average of Hospitals in Guangdong and the Pearl River Delta (2011) (%)

Degree/Professional Title	Ronggui Hospital	Average Level of Guangdong	Average Level of Pearl River Delta
Educational Background: Postgraduate	5.1	4.7	7.2
Bachelor	22.6	23.8	29.5
Junior College	43.4	31.5	33.5
Technical School and Lower Levels	29.0	40.0	29.8
Professional titles: Senior	1.3	1.6	2.0
Associate Senior	9.8	6.4	7.9
Intermediate	20.0	16.6	18.9
Primary	62.2	65.6	62.2

(2) Beds

The number of beds is one of the important indicators reflecting the scale of a hospital and the volume of its medical resources. From 2006 to 2011, the authorized beds of Ronggui Hospital remained at 400.But from 2009 to 2011 the actual number of beds in use is 490, way over 243, the average number of Guangdong. The last three years saw a relatively high usage rates of beds with 87.7% in 2009, 99.0% in 2010 and 89.3% in 2011. According to the National Standard of the Ideal Usage Rate of Beds (which is 80%-85%) and the ideal range of usage rate of beds required by the Hierarchical Management Standards of General Hospitals (which is 85%-93%), it can be seen that the usage rate of beds in Ronggui Hospital is relatively high but still more beds should be added. However, a horizontal comparison shows another picture. The rate is lower than the average rate of Foshan, which was 95.1%, the average rate of the Pearl River Delta region, which was 94.9% and the average rate of Level-Three hospitals in Guangdong, which was 101.6% (table 6).

Table 4-5 Usage of Beds in Ronggui Hospital (2006-2011) (Source: Annual Financial Statement of Ronggui Hospital)

	2006	2007	2008	2009	2010	2011
Number of authorized beds	400	400	400	400	400	400
Number of actually available beds	400	400	400	490	490	490
Number of actually available beds for Critical Care Medicine	12	12	12	12	12	12
Number of actually available beds for Emergency Department Observation Room	-	-	-	8	8	8
Usage rate of beds（%）	77.7	86.1	94.9	87.7	99.0	89.3
Average days at hospital of the discharges	7.8	8.2	9.3	8.1	8.1	7.9

Table 4-6 Usage of Beds in Ronggui Hospital and other Level-Two Hospitals in Foshan and the Pearl River Delta Region and Level-Three Hospitals in Guangdong (2011)

	Ronggui Hospital	Average Rate of Foshan	Average Rate of Level-Two Hospitals in the Pearl River Delta Region	Average Rate of Level-Three Hospitals in Guangdong
Usage Rates of Beds（%）	89.3	95.1	94.9	101.6
The average admission days of the discharges	7.9	8.9	9.3	8.9

(3) Equipment

During the Eleventh Five Year Plan period, the total assets of Ronggui Hospital, the gross value of fixed assets and the total value of equipment more than ten thousand yuan rose from 164.937 million yuan, 97.427 million yuan and 32.622 million yuan in 2006 to 445.131 million yuan, 144.955 million yuan and 71.779 million yuan respectively in 2010 with an average annual growth rate of 28.17%, 10.44% and 9.98%. These figures reflect that the Hospital's fixed assets and its capability of providing better diagnosis and treatment is increasing. But the growth was slower compared with the growth rate of Ronggui's social and economic development in this period (the average annual growth rate was 14.01%). As for the gross value of and the number of equipment more than ten thousand yuan, the Hospital has obvious advantages over other Level-Two hospitals in the Pearl River Delta, but it still has a large gap to fill compared with Level-Three hospitals in Guangdong.

Table 4-7 Equipment of Ronggui Hospital (2001-2010) (Source: Annual Financial Statement of Ronggui Hospital)

Item	2006	2007	2008	2009	2010	2011	Average Annual Growth Rate %
Total assets (million yuan)	164.937	180.795	244.621	284.686	445.131	470.091	28.17
Gross value of fixed assets (million yuan)	97.427	108.634	126.962	135.668	144.955	149.572	10.44
Gross value of professional equipment (million yuan)	32.622	40.909	57.518	63.813	71.779	74.409	21.79
Total value of equipment worthy of ten thousand yuan and beyond(million yuan)	89.071	97.872	114.735	122.075	130.324	133.841	9.98
The number of equipment worthy of ten thousand yuan and beyond	427	532	607	667	718	759	13.87
The number of equipment worthy of 0.5-0.99 million yuan and	6	7	13	15	17	17	29.74
The number of equipment worthy of one million yuan and beyond	12	14	17	18	19	20	12.17

Table 4-8 Equipment More than Ten Thousand Yuan in Ronggui Hospital, Level-Two Hospitals in the Pearl River Delta Region and Level-Three Hospitals in Guangdong (2011)

	Ronggui Hospital	Average of Level-Two Hospitals in the Pearl River Delta Region	Average of Level-Three Hospitals in Guangdong
The total value of equipment worthy of ten thousand yuan and beyond(million yuan)	133.84	39.38	237.95
The number of equipment worthy of ten thousand yuan and beyond	759	256	1265
The number of equipment worthy of 0.5 -0.99 million yuan and beyond	17	8	41
The number of equipment worthy of one million yuan and beyond	20	6	35

(4) Infrastructure

From 2001 to 2011, Ronggui Hospital's gross and net area of housing for business purpose were 42,119.1 square meters and 38,538.1 square meters separately. In 2011, gross area of each ward bed and net area of each ward bed were 85.96 square meters and 78.65 square meters respectively. Compared with the required areas of each bed by the Construction Standards for the Preliminary Modernization of Hospitals in Guangdong (which are 120 square meters and 110 square meters), it can be seen that the Hospital hardly meets the requirement. This means that the hospital's infrastructures fails to meet the demand of healthcare development.

Table 4-9 Ronggui Hospital's Infrastructure Development from 2006 to 2011(square meters) (Source: Annual Financial Statement of Ronggui Hospital)

Item	2006	2007	2008	2009	2010	2011
Gross area of housing for business purpose	42,119.1	42,119.1	42,119.1	42,119.1	42,119.1	42,119.1
Net area of housing for business purpose	38,538.1	38,538.1	38,538.1	38,538.1	38,538.1	38,538.1
Gross area of each ward bed	105.70	105.70	105.70	85.96	85.96	85.96
Net area of each ward bed	96.34	96.34	96.34	78.65	78.65	78.65

4.1.4 Analysis of assets operation

(1) Assets and Liabilities

Asset-liability ratio is an internationally recognized important criterion to measure one organization's repaying capability and to analyze its operation. Conservatively speaking, the ratio should be less than 50%.Otherwise, the organization is at risk. Analysis of statistics shows that the average annual growth rate of Ronggui Hospital's total assets and its gross liabilities from 2006 to 2011 were 23.30% and 59.23%. The growth rate of gross liabilities far exceeded that of total assets. And at the same time, the asset-liability ratio was growing at the rate of 29.14% annually. In 2010 and 2011, the figures had surpassed the 50% threshold, reaching 55.46% and 55.10% respectively.

From interviews, it is found that the substantial growth of the Hospital's gross liabilities is mainly attributed to the government which promotes the hospital to operate on loan. The Hospital loaned 76 million yuan in 2008, 130 million yuan in 2009 and 180 million yuan in 2012. This reflects that the government intervened heavily in the Hospital's operation and the hospital lacks independence, which, in the long run, does no good to the Hospital's independent operation and development and will hinder separation of management and administration of public hospitals.

Table 4-10 Ronggui Hospital's Assets and Liabilities from 2006 to 2011 (Source: Annual Financial Statement of Ronggui Hospital)

Indicator	2006	2007	2008	2009	2010	2011	Average annual growth rate (%)
Total assets (million yuan)	164.937	180.795	244.621	284.686	445.131	470.091	23.30
Gross value of fixed assets (million yuan)	97.427	108.634	126.962	135.668	144.955	149.572	7.98
Gross liabilities (million yuan)	25.307	29.257	78.116	112.133	251.299	259.022	59.23
Asset-liability ratio(%)	15.74	16.18	31.93	39.39	56.46	55.10	29.14

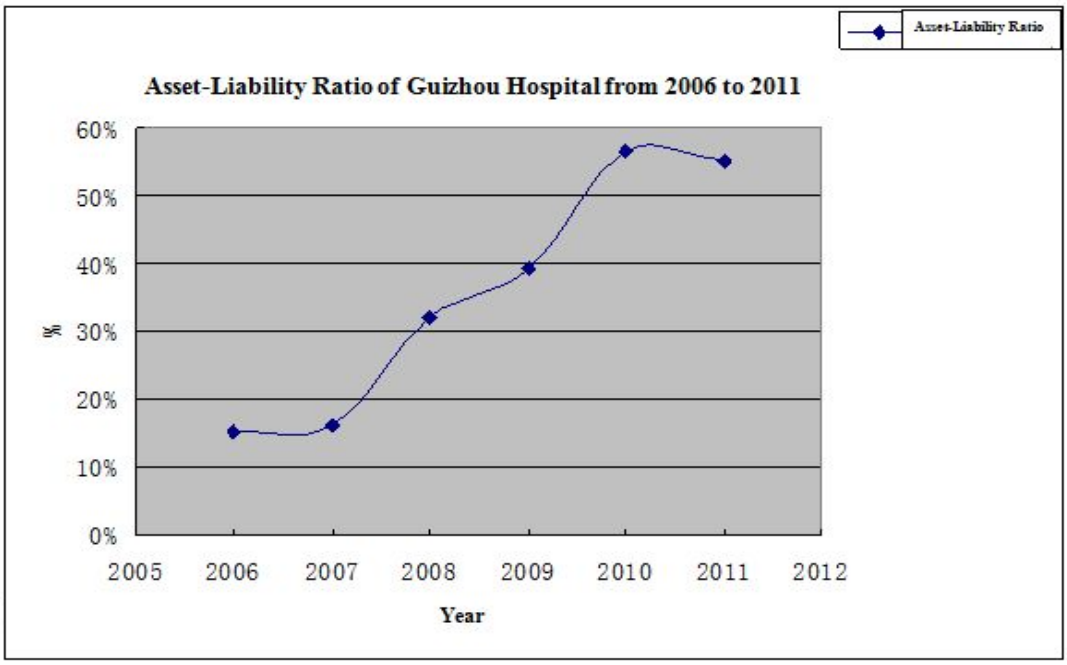

Figure 4-2 Asset-Liability Ratio of Guizhou Hospital from 2006 to 2011

(2) Revenue, Expenditure and Balance

Analysis of the structure of revenue: from 2008 to 2011, the total revenue and business revenue of Ronggui Hospital increased from 215.54 million yuan to 299.01 million with

an annual increase of 10.4%. Except for the 1.1 million financial subsidies from governments at all levels, the total revenue of the Hospital all came from its business, which indicated that government investment to the Hospital was in such a severe shortage that the Hospital had to keep up its normal operation by creating extra incomes. According to the analysis, business revenue from 2008 to 2011 was on the rise but the increasing rate experienced a slowdown, with annual increase rates at 17.22%, 14.83%, 13.51% and 6.44%. In particular, there was an obvious slowdown in the increasing rate of 2011, showing that the hospital had come to a bottleneck in terms of creating revenues.

Revenues in medicine and medical treatment saw a steady annual increase of 9.5% and 10.21% respectively and took up 42% and 55% of the business revenue with a relatively stable gap between each other. The fact that revenues in medical treatment took up a larger proportion indicates that, under the circumstance of the new medical reform promoting zero markup of medicine, hospitals should focus on improving the level and quality of medical service and ameliorate the structure of business revenue as soon as possible.

Table 4-11 Composition of Total Revenue in Ronggui Hospital in 2008 -2011 (Source: Annual Financial Statement of Ronggui Hospital)

Item	2008		2009		2010		2011	
	Amount (Million Yuan)	Proportion(%)	Amount (Million Yuan)	Proportion (%)	Amount (Million Yuan)	Proportion (%)	Amount (Million Yuan)	Proportion (%)
Total Revenue of the Hospital	21.554	100	24.751	100	28.203	100	29.001	100
Business Revenue	21.554	100	24.751	100	28.093	99.61	29.001	100
Revenues in Medicine	9.088	42.16	10.542	42.59	11.939	42.50	11.931	41.14
Revenues in Medical Treatment	12.099	56.13	13.864	56.02	15.602	55.72	16.198	55.85
Other Revenues	0.367	1.70	0.344	1.39	0.552	1.96	0.872	3.01
Revenues in the Form of Financial Subsides	0	-	0	-	0.110	0.39	0	-

Analysis of the cost structure and surplus: the total expenditure of Ronggui Hospital in 2011 was 274.86 million yuan, taking up 94.78% of the total revenue with an increase of 35.76% compared with that in 2008. The proportions of expenditure in medicine and medical treatment are relatively stable, standing at about 42% and 50% respectively. . Considering the building of a new hospital and the government's demand that a certain amount of surplus (12 million in 2008-2009, 15 million in 2010- 2011) be invested in the operation of the new hospital, the actual surplus of the hospital was at a low level.

Table 4-12 Expenditure and Balance of Ronggui Hospital from 2008 to 2011 (Source: Annual Financial Statement of Ronggui Hospital)

Item	2008		2009		2010		2011	
	Amount (Million Yuan)	Proportion（%）	Amount (Million Yuan）	Proportion（%）	Amount (Million Yuan）	Proportion（%）	Amount （Million Yuan）	Proportion（%）
Total Expenditure	20.306	94.21	23.535	95.09	26.682	94.61	27.486	91.92
Expenditure in Medical Treatment	10.621	49.28	12.912	52.17	14.220	50.42	14.851	49.67
Expenditure in Medicine	9.371	43.48	10.445	42.20	12.128	43.00	12.030	40.23
Other Expenditure	0.314	1.46	0.178	0.72	0.232	0.82	0.606	2.03
Balance	1.248	5.79	1.215	4.91	1.521	5.79	1.515	5.07

(3) Per Capita Work Efficiency

From 2006 to 2011, on average, the business revenue of every active employee in Ronggui Hospital increased from 246,300 yuan to 369,600 yuan at a rate of 50.6%. The number of outpatient visits and response to emergency calls throughout the year increased from 1877.8 to 2526.4 at a rate of 34.54%. From a horizontal comparison, in 2011, the average annual outpatient visits of every doctor in Ronggui Hospital outnumbered those in Level-Two hospitals in the Pearl River Delta region and Level-Three hospitals in Guangdong province, by 2.3 times of the former and 3 times of the latter.

According to results of a questionnaire: only 6.2% of the Hospital's staff are satisfied with their current bonus and income. The statistics below show clearly a huge contrast

between the high work load, huge pressure and low salary of the medical staff. Therefore, it is urgent that the Hospital should improve benefits for its staff as soon as possible so as to highlight the service value of the medical staff.

Table 4-13 Work Efficiency of Staff in Ronggui Hospital from 2008 to 2011 (Source: Annual Financial Statement of Ronggui Hospital)

Index	2006	2007	2008	2009	2010	2011	Average Annual Growth Rate (%)
Average Annual Business Revenue Per Capita (Million Yuan)	0.2463	0.2586	0.2789	0.3029	0.3418	0.3696	0.0846
Number of Outpatient Visit Per Capita Per Year	1877.8	1619.0	1646.0	2260.9	2539.4	2526.4	6.11

Table 4-14 Comparison of Staff Work Efficiency among Ronggui Hospital, Level-Two Hospitals in the Pearl River Delta region and Level-Three Hospitals in Guangdong Province

	Ronggui Hospital	Average in Level-Two Hospitals in the Pearl River Delta region	Average in Level-Three Hospitals in Guangdong Province
Annual Business Revenue(Million Yuan)	280	120	690
Annual Business Revenue Per Capita(Yuan)	369604.5	270104	457793.6
Number of Outpatient Visit Per Capita Per Year	2526.4	1086.5	815.7

4.1.5 Analysis of business activities

(1)Analysis of Medical Service Quantity

From 2006 to 2011, the number of outpatient (emergency) visits rose from 1,211,200 to 2,043,900, physical examination, from 32,300 to 91,800, and inpatient care from 13,700 to 16,700, with an annual growth rate of 11.03%, 23.24% and 4.06% respectively. In particular, the number of outpatient visits increased from 1,118,000 in 2006 to 1,224,300 in 2011, while that of emergency visits rose from 93,200 to 819,600, with an annual

increase rate of 1.83% and 54.46% respectively. The increase of inpatient visits was well below that of the emergency visits (See Table 4-15).

Compared with 2010, the number of outpatient (emergency) visits, physical examination and inpatient care decreased at varying degrees. In 2011, though the number of inpatients (16,700) in Ronggui Hospital was half of the average number (32,500) of that in Level-Three hospitals in Guangdong province, the number of outpatient and emergency visits and physical examination was well over the average number of that in hospitals in the Pearl River Delta region and Guangdong province. This may give a hint that Ronggui Hospital can do more to improve its service of physical examination due to the special characteristics of Ronggui (See Table 4-16).

Table 4-15 Quantity of Medical Service in Ronggui Hospital 2006-2011 (Source: Annual Financial Statement of Ronggui Hospital)

Index	2006	2007	2008	2009	2010	2011	Annual Growth Rate (%)
Outpatient Visit	117978	1042213	1137487	1364861	1184535	1224299	1.83
Emergency Visit	93219	108919	134893	482329	902881	819598	54.46
Physical Examination	32303	69796	66485	89494	100947	91846	23.24
Inpatients	13714	12542	13976	15559	17332	16733	4.06
Rescued People from Outpatient Visit	237	372	465	482	575	632	21.67
Rescued People from Emergency Visit	640	791	709	630	629	621	-0.60
Outpatient Operation	26574	28503	29507	29871	28683	30500	2.79
Inpatient Operation	5314	6412	7394	6974	7553	7067	5.87

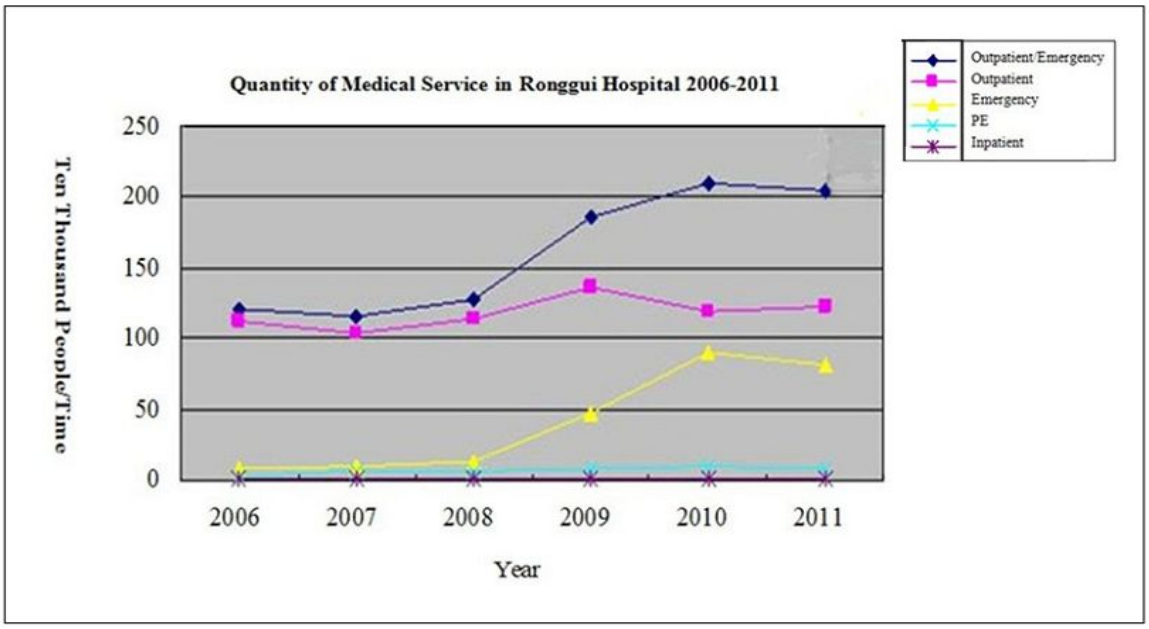

Figure 4-3 Quantity of Medical Service in Ronggui Hospital 2006-2011

Table 4-16 Comparison of Medical Service Quantity in Ronggui Hospital with that in Level-Two Hospitals in the Pearl River Delta region and Level-Three Hospitals in Guangdong Province (Million Person/Time)

	Ronggui Hospital	Average in Level-Two hospitals in the Pearl River Delta region	Average in Level-Three hospitals in Guangdong Province
Outpatient Visit	1.2243	0.3933	1.0404
Emergency Visit	0.8196	0.059	0.1025
Physical Examination	0.0918	0.0320	0.0517
Inpatient Care	0.0167	0.0094	0.325

(2) Analysis of Medical Service Quality

As can be seen from Table 17, the cure rate, fatality rate and infection rate of sterile operation in Ronggui Hospital went down from 2006 to 2011, with an annual decrease rate of 0.39%, 6.89% and 6.89%. The recovery rate and infection rate of inpatient operation increased at a rate of 6.27% and 26.19% respectively on a yearly basis, which showed that while improving the quality of medical service, the Hospital should also pay more attention to control infection of inpatient operation. Compared with Level-Two hospitals in the Pearl River Delta region and Level-Three hospitals in Guangdong province, the recovery rate of Ronggui Hospital in 2011 was above that in those hospitals, but lagged

behind them in cure rate and fatality rate. In particular, Ronggui Hospital lagged far behind them in cure rate, indicating that there remains much to be done to improve its medical service quality.

Table 4-17 Quality of Medical Service in Ronggui Hospital 2006-2011
(Source: Annual Financial Statement of Ronggui Hospital)

Index (%)	2006	2007	2008	2009	2010	2011	Annual Growth Rate (%)
Cure Rate	60.6	55.8	60.6	57.9	56.9	59.42	-0.39
Recovery Rate	28.2	32.9	28.6	33.1	35.9	38.23	6.27
Fatality Rate	0.6	0.6	0.5	0.5	0.4	0.42	-6.89
Infection Rate of Sterile Operation	0.1	0	0	0.1	0.07	0.07	-6.89
Infection Rate of Inpatient Operation	0.2	0.33	0.59	0.83	0.74	0.64	26.19
Accordance Rate of Diagnosis upon Discharge and Admission	98.8	98.9	99.4	99.5	99.4	99.46	0.13
Accordance Rate of Diagnosis Before and After Operation	98.7	98.9	100	100	99.9	99.88	0.24
Diagnosis Rate within Three Days of Admission	96	98.2	97	97.3	97.1	98.55	0.53
Success Rate of Rescuing Critically Ill Patient	87.8	88.1	87.3	88.7	90.1	88.89	0.25

Table 4-18 Comparison of Medical Service Quality between Ronggui Hospital and Level-Two Hospitals in the Pearl River Delta Region and Level-Three Hospitals in Guangdong Province, 2011

Index (%)	Ronggui Hospital	Average in Level-Three hospitals in Pearl River Delta Region	Average in Level-Three hospitals in Guangdong Province
Cure Rate	59.4	66.4	63
Recovery Rate	38.2	30.7	34.1
Fatality Rate	0.4	0.8	1.0

(3) Analysis of Medical Cost

In 2011, the average costs for every outpatient visit and hospitalization were 87.53 yuan and 6118.53 yuan respectively, up by 5.27% and 4.9% compared with those in 2009.

Judging from a horizontal comparison, the cost for each outpatient visit in Ronggui Hospital was far lower than that in other Level-Two hospitals in the Pearl River Delta region (126.3 yuan) and that in Level-Three hospitals in Guangdong province (213.6 yuan), but slightly higher than the average in Foshan. The average cost for every hospitalization was slightly over that in Level-Two hospitals in the Pearl River Delta region (5722.2 yuan) but was half of that in Level-Three hospitals in Guangdong Province (12223.5 yuan). On the one hand, the above statistics show that the Hospital enjoys a certain competitive advantage in the medical service market; on the other hand, they indicate the low consumption level of migrant workers (whose major cases are common and frequently-occurred diseases) that the Hospital mainly serves. This situation hinders the increase of service price to some extent.

Table 4-19 Average Cost for Each Patient in Ronggui Hospital 2006-2011 (Source: Annual Financial Statement of Ronggui Hospital)

Index (Yuan)	2009	2010	2011	Annual Growth Rate (%)
Average Cost for Each Outpatient Visit	83.15	82.51	87.53	5.27
In Which: Cost for Medicine	38.38	39.14	40.51	2.74
Average Cost for Hospitalization	5832.2	5953.17	6118.53	4.91

Table 4-20 Comparison of Medical Cost in Ronggui Hospital and that in Level-Two hospitals in the Pearl River Delta region and that in Level-Three hospitals in Guangdong province, 2011

Index (Yuan)	Ronggui Hospital	Average in Level-Two hospitals in the Pearl River Delta region	Average in Level-Three hospitals in Guangdong Province
Average Cost for Each Outpatient Visit	87.5	126.3	213.6
Average Cost for Hospitalization	6118.5	5722.0	12223.7.5

(4)Analysis of Types of Diseases

According to the componential analysis of emergency diseases, inpatient diseases and inpatient fatality diseases during the evaluation of Ronggui Hospital for the title of “2A

Hospital", it can be seen that Ronggui Hospital mainly deals with common and frequently-occurring diseases. Meanwhile, it can tell the type of a disease under diagnosis. In consideration of the top ten types of diseases in recent three years, one may see that the respiratory and traumatic diseases take up a large proportion. Besides, coronary diseases and hypertension had risen to the top ten. This may give the Hospital a hint that, under the social background of an aging population, it should pay attention to not only the common and frequently-occurred diseases but also the prevention and treatment of senile diseases in its future development.

Table 4-21 Componential Analysis of Diseases of Patients in Ronggui Hospital (Source: Annual Financial Statement of Ronggui Hospital)

	Pathogeny of Emergency		Pathogeny of Hospitalization		Pathogeny of Fatality	
Sequence	Type of Disease	Ratio (%)	Type of Disease	Ratio (%)	Type of Disease	Ratio (%)
1	Upper Respiratory Infection (URI)	65	Bronchitis	3.2	Traumatic Brain Injury (TBI)	20
2	Trauma	15	Hand Crushing Injury	2.5	Traumatic Head Injury	5.8
3	Gastroenteritis	5.5	AcuteUpperRespiratory Infection (AURI)	2.0	Respiratory Failure	4.35
4	Urinary System	4	Spontaneous Vertex Delivery	2.68	Sudden Death	2.85
5	Vertigo	3	Chronic Obstructive Pulmonary Disease(COPD)	2.2	DrugIntoxication	2.9
6	Dog Bites	2	First degree Perineal Laceration During Delivery	1.54		
7	Hypertension	2	Delivery with Umbilical Cord around the Neck for 1 Week	1.83		
8	Cholecystitis	1.5	Premature Rupture of Membrane (PROM)	1.68		
9	Allergic Diseases	0.5	Senile Cataract	1.48		
10	Gastritis	0.5	Acute Bronchitis	1.63		

(5) Professional Instruction

In the past decade, the number of community health service centers instructed by Ronggui Hospital stayed stable, with ten in 2001, eleven in 2007 and twelve in 2020; and the

number of technicians in community and rural healthcare centers trained by the Hospital remained at 130 from 2006 to 2011. Those statistics show that Ronggui Hospital has limited responsibility in professional instruction and staff training of its inferiors.

4.1.6 Analysis of medical capacity building and development potential

(1) Capacity of Teaching, Scientific Research and Innovation

Currently, Ronggui Hospital serves as the practicing hospital for Sun Yat-Sen University, Southern Medical University, Guangzhou Medical University, Guangdong Medical College and Shunde Polytechnic. Besides, it also serves as the Base for Clinical Research of Trauma Surgery of Guangdong Scientific Research Center of Trauma Treatment as well as the teaching hospital of Guangdong medical colleges and universities. From 2006 to 2011, the number of scientific research programs remained steady, with thirteen in 2006 and fifteen in 2011. Most of the programs were at municipal level with no more than one at provincial or national level. Average number of research papers published in the name of the Hospital annually was 116. Papers published in domestic core journals were on the rise year by year, with an annual average of fourteen. Generally speaking, Ronggui Hospital has a certain amount of capability in scientific research but remains blank in key specialty development. It falls far behind the requirement of the Construction Standards for the Preliminary Modernization of Hospitals in Guangdong, indicating that its capacity of scientific research and innovation remains to be further improved.

(2) Personnel Training

From 2006 to 2011, the number of staff for advanced studies remains steady with a minimum of 22 and a maximum of 25. The number of staff for further academic education first increased from 45 in 2006 to 51 in 2009 and then dropped to 32 in 2011. However, there was only one single form of training—online education. In recent three years, the funding for staff training remains fixed at one point two million yuan. The number of staff trained rose from 32 in 2006 to 52 in 2011, including the training of postgraduate and undergraduate interns. In the long run, it is necessary for the hospital to build up a long-term mechanism of human resource development in order to step up improving the quality of the medical staff.

(3) Building of Hospital Culture

Material culture, or the “Hard Culture” of the Hospital, is the material carrier of the hospital culture. There are some problems in Ronggui Hospital, such as the relatively small gross and net areas of housing for medical services, outdated supporting facilities, poor living facilities and working environment for the staff, lack of guidance facilities for patients, confusing layout of medical and living facilities. Those problems show that the building of material culture of the Hospital is at a low level, which needs urgent enhancement and improvement in order to provide complete and basic material factors for its medical, teaching and scientific research activities.

Behavioral and spiritual culture: Ronggui Hospital passed the evaluation of Level-Two hospital in 1991 and was the only one at town level, which helped it to attract pools of talents from all over the country. With team spirit in mind, the staff in the Hospital served patients under the guidance of the service purposes of “keeping doctor-patient in harmony, benefiting all families” and “providing standard, safe, qualified, and efficient services”, fully testifying the people-orientation of the hospital, unity of the staff and the pursuit of quality and perfection. However, in recent years, the managerial concept and the environment of the Hospital lag behind its economic development. The egalitarian distribution system of “Communal Pot” can no longer motivate the enthusiasm of the staff. Due to brain drain, the cohesion and solidarity of the staff diminished to some extent.

Besides, the Hospital strengthens its cultural development through various group and recreational activities, reflecting that staff had relatively high ideals and spirits. But this survey also reveals that the staff in general are not clear about the direction of the Hospital’s future development and weak in team solidarity.

Institutional culture: Ronggui Hospital puts much emphasis on nursing management. It arranges standard training for nursing staff so as to ensure standardized operation and medical safety. It also carries out the performance appraisal plan of KPI (Key Performance Indicators). Nevertheless, according to the survey, the Hospital has not yet established managerial systems such as the performance appraisal system, the promotion and distribution system for managerial staff. The implementation of some systems is no more

than a mere formality with little efficiency. For example, the key indicators of KPI implemented by the Hospital are simple and single. It lays particular stress on the appraisal of the quantity of medical service without much consideration of the quality of the service, technical difficulty, risk parameter, satisfaction of the patients. It does not pay particular attention to key positions and is unscientific, incomprehensive and unreasonable. All these problems show that the hospital lags behind in the building of institutional culture.Therefore, it is necessary that the Hospital introduce modern concept of management, upgrade and improve related management systems.

(4) Analysis of Staff and Patient Satisfaction Survey

This survey issued 200 satisfaction questionnaires for patients and 208 for the hospital staff. One hundred and eighty-seven effective responses of the former were received and 194 of the latter, with an efficiency rate of 93.5% and 93.3% respectively. According to the survey, patients were most satisfied with the Hospital in individual privacy (80.75%), least satisfied about the medical cost (50.27%), next in line was about the waiting time for treatment (59.92%), with all the rest of the items under survey staying around 75%. The statistics above show that Ronggui Hospital should, based on the “patient-oriented” service ideal, optimize the procedures and environment of medical treatment. It should build a humanitarian environment for close interaction between doctors and patients and enhance the image of the Hospital from the perspective of the patients. Considering that the average medical cost in Ronggui Hospital is far below that in other Level-Two hospitals in Foshan and the Pearl River Delta region as well as Level-Three hospitals in Guangdong Province, the reason for patients’ dissatisfaction with the high medical cost is the increasing medical cost on the whole. The fact that most of the patients in Ronggui Hospital are migrant workers with low consumption level and high percentage of self-supporting medical expenditure also attributes to the dissatisfaction with the medical cost.

As for the satisfaction questionnaires for the staff, the satisfaction rate of the staff in general is relatively low with only 13.9%. They are most satisfied with the interpersonal relationship between colleagues (52%), least with the income and bonus (6.2%), next comes the work environment (8.8%), vacation system (9.3%) and performance appraisal

system (9.3%). Moreover, the staff are also dissatisfied with chances for training and further education, the prospect of their future development and the management of the Hospital, as high as 33%, 34% and 41% respectively. The qualitative interview also reveals that the staff is not optimistic about their future development, which to a large extent diminishes their sense of identification with and belonging to the Hospital. Therefore, the Hospital should raise their remuneration, improve its management system and provide more opportunities for staff development so as to stimulate the motivation of the staff.

4.2 Socio-economic development of Ronggui and predictions of its medical service demand

Ronggui has witnessed rapid development and strengthened economy since the reform and opening-up. It earns itself the reputation of "town with GDP exceeding a hundred billion yuan" by establishing backbone industries such as smart home appliances, information electronics, medical care, chemical coatings and mechanical tooling. According to statistics, at the end of the Eleventh Five-year Plan period, Ronggui enjoys 37.591 billion yuan in GDP and 82,700 yuan in per-capita GDP, an increase of 101.94% and 80.52% respectively compared with those at the end of the Tenth Five-year Plan period.

Shunde, the bellwether of national economy, was granted the opportunity to be a comprehensive reform pilot area in 2009. Then, it initiated the super ministry reform and reform to expand power of major towns. As a capital of industry, Shunde will experience stronger comprehensive economic strength. According to the Twelfth Five-Year Plan for National Economic and Social Development in Shunde District, Foshan (Draft), during the Twelfth Five-Year Plan period, Shunde's GDP is expected to grow by an annual rate of 12%, and per capita GDP for permanent residents is expected to reach 128,000 yuan by 2015. Ronggui, as a major economic town of Shunde, is promised a bright future. It can be safely predicted from the above-mentioned figures that Ronggui will witness a boom in economy and a constant rise in disposable income of residents in the next five years, thus driving the medical and health care expenses.

According to statistics, the population of permanent residents in Ronggui grew by an

annual rate of 4.85% from 2003 to 2011. If this growth continues, Ronggui will have 562,400 permanent residents by 2015 and 712,600 by 2020. What's more, as an important industry manufacturing base in the Pearl River Delta, Ronggui will attract more migrant population as its urbanization speeds up and industrial economy develops. It is expected that people who work in the service industry will be over 800,000 by 2015and over 900,000 by 2020. The rapid expansion of population will be bound to bring about an increase of medical service users and more diversified medical service needs, thus posing new challenges to improve the supply capacity of medical service in Ronggui.

According to statistics, the average number of outpatient and emergency visits was 9.1 person times in 2009 and 10.2 person times in 2010. Besides, the hospital admission rate was 10.8% and 11.1% respectively in 2009 and 2010. Both rates are higher than those of the Guangdong Province and the whole country, signaling that residents in Shunde have higher requirement for medical service. With better social economic development and living standards, the medical market can be able to serve more people and the higher living standards will bring up more needs for medical health. It can be expected that by the end of the Twelfth Five-Year period, the medical service need level of Shunde people will be greatly improved.

4.3 Prediction of medical competition environment

Ever since Xingtan Hospital was entrusted by the First People's Hospital in Shunde, many experts have been assigned there and a new hospital management concept has been incorporated, which will raise its comprehensive strength and expand its market share of medical service in a short period. This will be a huge challenge to Ronggui Hospital as it is not well-prepared for the moment.

It is clearly put in the Twelfth Five Year Plan of Healthcare Development in the Shunde District that during these five years, the scale and scope of the Shunde District First People's Hospital, the Shunde District Traditional Chinese Medicine Hospital, the Shunde District Maternal and Child Care Center and Wu Zhongpei Memorial Hospital will reach those of Level-Three general or specialized hospitals, and the scale and scope of Guangdong Tongjiang Hospital and New Rongqi Hospital will reach those of Level-Three

general hospitals and Level-Two general hospitals respectively. The number of authorized beds at regular service in these two hospitals will increase to 500 and 400 respectively and the medical technical personnel of these two hospitals will increase to 550 and 500 respectively. At the same time, it is planned to put in place an additional eighty clinics and nursing service institutions, fifteen of them will be in Ronggui.

It is predictable that with the increasing scale and scope of medical institutions around Ronggui, the convenient transportation for the masses and the adoption of the strategy of Guangzhou and Foshan as One City, the distance between Shunde and the surrounding cities like Guangzhou will be shorten. In this case, the market share and amount of patients of Ronggui Hospital will be under threat as a result of fierce competition. All of these pose more and bigger challenges for the hospital’s future development.

4.4 Comparison and contrast of benchmark hospitals

Taking the factors like the scale of hospital development and the successful experience of upgrading to 3A hospitals, this research group selected Puning People's Hospital in the eastern Guangdong city Jieyang as benchmark hospital for Ronggui Hospital to compare with in the Twelfth Five-year period. Puning People's Hospital is the first Level-Three Grade-A hospital at county level in Guangdong province. The main indicators of this hospital are in the forefront compared with other hospitals of similar size. Its successful experience is worth learning from. Meanwhile, the study suggests that the long-term goal of Ronggui Hospital should be in line with the scale and medical teaching and research capabilities of the Shunde District First People's Hospital. In December 2010, Puning People's Hospital received the accreditation from Level-Three hospital assessment panel from Guangdong Provincial Health Department and become the first Level-Three Grade-A general hospital at county level in Guangdong, the fourth and the first 3A general hospital in eastern Guangdong province and the city of Jieyang respectively. Currently, the People's Hospital has 1247 working staff (109 with senior titles and 196 with intermediate titles). With 954 open beds currently and planned to expand to 1800 beds, the hospital is the strongest one with the biggest volume of business and highest level in Puning. The hospital is home to one key specialized subject of Guangdong Province (orthopedics), four key specialized subjects and one characteristic specialized subject of Jieyang

(ophthalmology, general surgery, cardiology, neurosurgery and gynecology), ten key specialized subjects and two characterized specialized subjects of Puning. The hospital serves not only over 2.3 million people and nearly one million migrants for medical care, teaching, scientific research and epidemic prevention, but also residents in the neighboring counties like Chaoyang, Chaonan, Luhe, Huilai and Jiexi, covering altogether over 6 million people.

In recent years, under the guidance of scientific outlook on development, the hospital adheres to the service purpose of “people's hospital for the people” and the motto of “Belief in Science, Service for Health". In the course of hospital’s development, the leaders seize the historical opportunity of development, focus on hospital’s internal building and put forward a series of concepts like “ideas determine outcomes”, “management determines success or failure”, “height determines intensity” and “culture determines the rise and fall”. They also set up the work guideline “life is of paramount importance; safety lies in details". The hospital puts in place scientific management system and makes it implemented. In the spirit of “talent localization”, the hospital attaches great emphasis on talents cultivation. With superb medical technology, high-quality service, the hospital has won reputation and brand recognition, scoring a leapfrog development.

Table 4-22 A Comparison of Key Indexes of 2011 between Ronggui Hospital, Puning Hospital and the First People’s Hospital in Shunde

Indexes	Ronggui	Puning	Shunde
Total Staff	809	1247	1913
Professionals	619	1096	-
Senior Professional Title	8	20	43
Associate Senior Professional Title	65	89	207
Construction Area (m^2_	42119.1	48550.2	96000
Open beds	490	954	1100
Outpatient and Emergency Visits(ten thousand)	122.43	76.65	165 (2009)
Annual Hospitalization Visits (ten thousand)	1.67	4.16	4.7 (2009)
City-level and higher level Key Specialized Subjects	0	5	1
City-level Specialized Subjects	0	1	3
Revenue (100 million)	2.9	4.04	-
Average Outpatient Fee (Yuan)	87.53	182	-
Average Hospitalization Costs (Yuan)	6118.53	6722	-

4.5 Analysis of clinical discipline development

This paper divides different departments in the hospital into following categories (see chart 4) after an in-depth communication with leaders, management staff and other staff in the hospital, an analysis of the income of different departments in the past five years and the whole personnel quality, and the changing trend of medical service market in Ronggui. On that basis, interviews with staff at all levels were conducted and first-hand information of their opinions about the future of the hospital and the development of different disciplines and departments were collected. Experts in hospital management were also consulted. Based on the results of exchanges with experts in hospital management, the author uses the BCG Matrix to classify clinical departments of a hospital into the following categories. (Figure 4-4) (Wang & Liu, 2005):

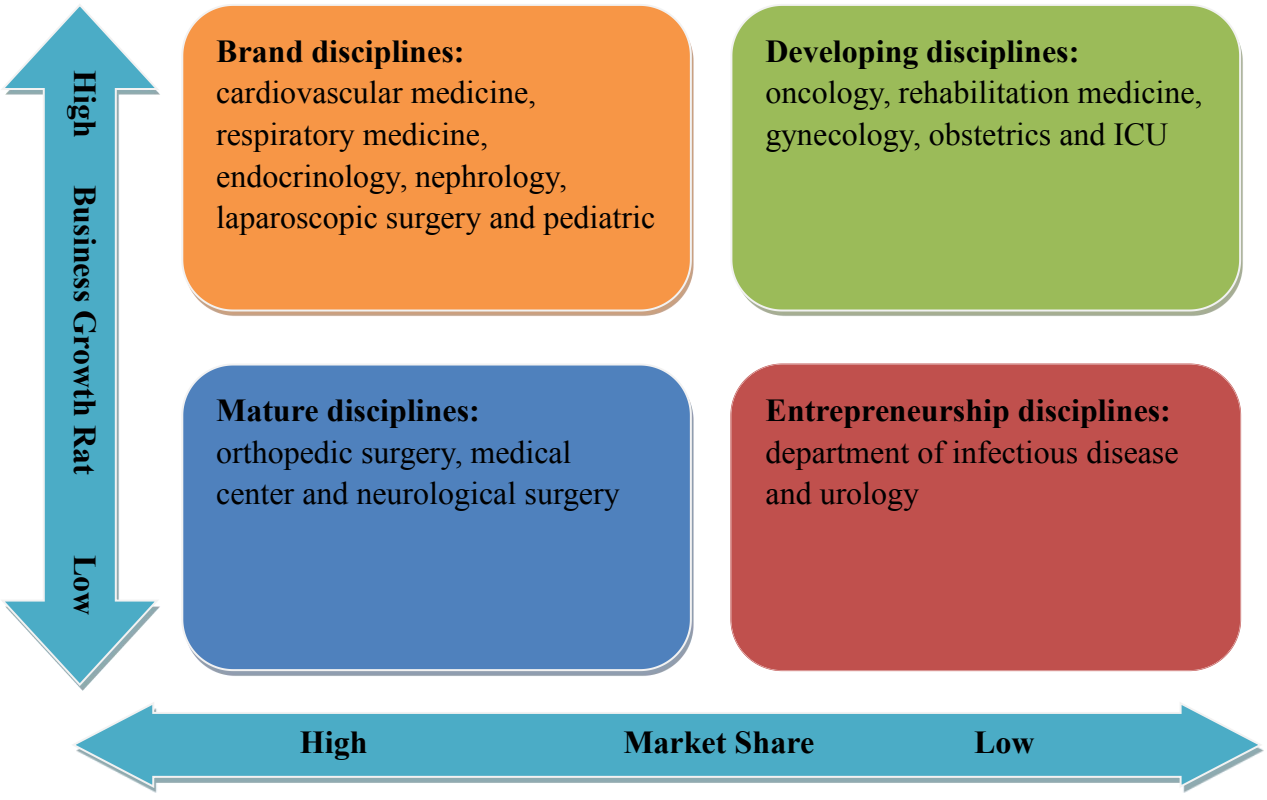

Figure 4-4

Brand Disciplines: These disciplines are in fast-growing markets; they are competitive, but not necessarily account for a large absolute share in the hospital's business income. More investment is needed from the hospital in technology and equipment. These disciplines have attractive prospects of development, and are the leading disciplines in the future. They include cardiovascular medicine, respiratory medicine,

endocrinology, nephrology, laparoscopic surgery and pediatrics.

Mature disciplines: These disciplines are in a low-growth, high-share market. They are the cash machine for the hospital's revenue, but have limited potential to grow at a high speed. They often focus on maintaining the existing scale keeping the current market share. They include orthopedic surgery, medical center and neurological surgery.

Developing disciplines: These disciplines are in a high-growth market, but due to technical, manpower, equipment investment and other reasons, the competitiveness is still insufficient, and they are potential disciplines. The hospital should support these departments to the best of its ability in order to capture future market. They include oncology, rehabilitation medicine, gynecology, obstetrics and ICU.

Entrepreneurship disciplines: These disciplines have low market share and growth rates, belonging to the followers of the market. Support from the hospital is necessary. The hospital may consider maintaining the status quo or downsizing. The department of infectious disease and urology fall into this category.

4.6 SWOT analysis

This section intends to reveal an analysis of the internal strengths and weaknesses as well as external opportunities and threats of Ronggui Hospital by means of a review of its history, an analysis of quantitative data, a comparison and contrast of all key indexes, questionnaire of satisfaction and qualitative interview with patients and employers. (See Figure 4-5)

4.6.1 Strength(S)： To Ronggui Hospital, its strength against its competitors embodies in the resources, technical skills and so on, indicating a striking competitiveness in the market. The formation of the strength can be attributed to many objective and subjective factors. Particularly, the strengths of Ronggui Hospital are:

A Prolonged and Profound History

Established in 1958, Ronggui Hospital was rated as National Level-Two hospital in 1991, being the only township hospital that received the honor. This achievement was recognized and highly appreciated by other hospitals home and abroad, attracting a host of visitors and nationwide talents. Ronggui Hospital, with a large scale, fantastic staff and

renowned reputation, exerts a huge influence on its patients who are mainly from Ronggui and neighboring areas. Despite the recent slump in general development, people in Ronggui are still affectionate for Ronggui Hospital.

A High-Standard Medical Service

In the 1990s, the widely-known Ronggui Hospital attracted many job hunters, and during 1994-2006, with the protracted help of the Second Affiliated Hospital of Sun Yet-Sun University to cultivate doctors for Ronggui Hospital, many of them have become the backbone of hospital's development and leaders of clinical departments. They are characterized by strong service capabilities, high technical skills and good service quality. Patient satisfaction surveys reveal that patients are highly satisfied with doctors' medical skills and service.

A Unique Location

Among hospitals in Ronggui, Ronggui Hospital is the only public one, and the rest two, New Rongqi Hospital and Tongjiang Hospital, are both private hospitals. The New Rongqi Hospital changed from a public hospital into a joint stock hospital in 2005. Influenced by traditional Chinese concepts, the status of "public hospital" earns considerable trust from Ronggui people.

4.6.2 Weakness (W)： The weakness of Ronggui Hospital refers to the deficiencies and insufficiencies compared with its competitors, which can be seen from the following respects: backward hospital wards and medical equipment, high mobility of staff and outdated managerial mechanism.

Dilapidated Facade, Outdated Equipment

Twenty years has passed since the present site of Ronggui Hospitals was built in 1990. Now the medical treatment and living environment are in no proportion with the Hospital's revenue and socio-economic development. The hardware infrastructure is relatively backward, unable to keep up with the pace of development. The Hospital operates in a severely overloaded manner, limiting the service quality and technical level. It is commonplace for patients to encounter "three long and one short" phenomenon, namely long time for registration, waiting and billing, short treatment time and poor

treatment environment. On the other hand, medical workers are all overloaded, working in a poor environment. Therefore, it is urgent to solve problems like hospital equipment and environment and service procedures.

Currently the hospital equipment is relatively backward in Shunde district as many surgeries and examinations cannot be carried out. For example, due to examination and approval processes, the CT machine which has been used for more than ten years cannot be replaced, leading to many cases being transferred to other hospitals.

Little Support from Government with Many Restrictions

From 2008 to 2011, apart from the 1.1 million yuan fiscal subsidies from different levels of government, the total revenue of the hospital comes from business income and income growth is increasingly slow. In 2011 the growth rate is only about three percent, while the government invests nearly nothing in employees' salary, indicating a severe lack of government responsibility and a serious shortage of investment to hospital. In this sense, the Hospital has to rely on itself to sustain, which is not conducive to its long-term development. There are many more other factors that are not conducive to talent cultivation and sustainable development of the Hospital, for instance: the equipment is backward, the replacement process is time-consuming, the equipment needed often fail to be part of government procurement list and due to policy restriction from Ronggui government, and the hospital has no independent power over personnel and finances.

Shortage of Talents, Unstable faculty, High Brain Drain, Low Morale

The Hospital is short of talents, especially department leaders who are highly educated and have high academic title and high quality. The turnover of staff is very high, making low team cohesion one of the most important factors impeding the sustainable development of Ronggui Hospital. By the end of 2011, due to low salary, lack of long-term development platform and other reasons, two PhDs, more than ten clinic doctors and a host of nurses had left the Hospital, resulting in less stable personnel, weak team cohesion, and low morale.

Many of the backbones in different departments who started working from the 1990s have already been integrated into the local community, having a certain status in the society. Influenced by the traditional thoughts, to a certain extent, some of them become

complacent, lacking concept of vigilance and competition, and unwilling to take the initiative to learn new knowledge and take new challenges.

In addition, in recent years the training and education opportunities provided by the hospital cannot satisfy the employees' desire for knowledge. The training investment is very limited, incentive mechanism is not perfect; therefore, it is difficult to mobilize the enthusiasm of employees. Meanwhile, there are no incentives, no matter salary or environment, to attract high-level talents. The hospital is faced with a dilemma of "hard to retain talents, harder to introduce them".

Rigid Managerial Concept and System

The currently-implemented KPI performance assessment program cannot meet the needs of modern hospital management. The single and traditional index system fails not only to reflect the quality of medical services, but to reflect the "patient-centered" service philosophy, priority towards key positions or the real value of the medical staff. The indiscriminate status deals a heavy blow to the enthusiasm and initiative of the staff. Although ISO9001 quality management system is implemented, its assessment is based on quantity rather than quality. It is not linked with business income, not taking the hospital balance rate into consideration, but is focused on internal and vertical comparison. Not taking changing objective factors into account, it becomes less operable and inefficient, often ending up as a mere formality.

In addition, there is no communication platform to connect the leaders and grassroots. On the one hand, the leaders cannot hear the voices from the grassroots and their real opinions and thoughts about the Hospital in a timely and effective manner. On the other hand, the grassroots can never know the leaders' vision of future development. The leaders are often confined by the management system, and therefore know nothing of the art of management. They perform poorly in execution and have no control on the clinical departments.

Lack of Research Atmosphere and Insufficient Subject Development

In recent years, there have been studies done and papers published by doctors, but the amount is still small. More often than not, application of projects is not for the purpose of research but for promotion. In Ronggui Hospital, there are a number of backbone doctors,

but compared with the surrounding hospitals, there is no advantage of different departments, as its focus is mainly in treating common diseases. Special department development falls short of the development of the hospital and demand of Ronggui people for medical services. Departments in recent years are becoming more and more imbalanced in strength, but still no prominent special department or “fist product” come into being. The differentiation strategy cannot be highlighted, making the hospital uncompetitive in the market-driven medical market.

4.6.3 Opportunity (O)： Opportunity refers to the attractive and positive respects to the survival and development of Ronggui Hospital against the changing external environment. A sound macroeconomic situation is beneficial to the rapid and sustainable development of medical economy. If Ronggui Hospital can take advantage of this opportunity, it will become more competitive.

High Medical Consumption Level of Patients

According to the Twelfth Five-Year Plan of National Economy and Social Development in Shunde, Foshan (Draft), during these five years, GDP in the whole district will see an annual average increase of 12%. By 2015, the GDP per capita of the permanent residents will reach 128,000 yuan. As a major economic town in Shunde, Ronggui is very promising in the future.

The implementation of three basic medical insurance policies has brought opportunities for the Hospital. “High quality, reasonable price and efficiency” have become the yardstick for choosing hospitals, and patients now can choose which hospital to go and which doctor to see. On February 22, 2012, in a State Council executive meeting, it is required that the basic medical care level should be raised and that by 2015 the government subsidiary for medical insurance in urban and rural areas should be above 360 yuan per year per person. Also, 75% of the Hospital costs should be covered in the three basic medical insurances. All of these will provide an opportunity to Ronggui Hospital to compete in a broader market.

Employees Are More Confident of the Future

It is clearly put forward in the Twelfth Five Year Plan of Healthcare Development in the Shunde District that in accordance with the requirements in theGuangdong Hospital

Accreditation Standards and Evaluation Rules, Ronggui Hospital should reach the scale of scope of Level-Three general hospital in the Twelfth Five-year Plan period. This is a clear positioning for the future development of Ronggui Hospital, namely to be a township Level-Three general hospital. Building new wards, upgrading scale and striving to be a Level-Three hospital will bring the hospital and its employees more expectations and confidence. It is believed that through the concerted efforts of leaders and all staff, the Hospital will be out of the woods, getting better and better. Such a faith will greatly boost morale and inspire enthusiasm.

So far, Ronggui Hospital has become the practicing hospital of Sun Yet-san (Medical) University, Southern Medical University, Guangzhou Medical University, Guangdong Medical College, Shunde Polytechnic College, and it is also the base for clinical research of trauma surgery of Guangdong Scientific Research Center of Trauma Treatment and a teaching hospital of Guangdong medical colleges and universities. Its cooperation with higher medical college enables the hospital to enjoy the teaching and medical resources of the college. The positioning of Level-Three hospital will make the hospital prioritize teaching and research, which is conducive to the training and cultivation of more capable medical workers and the all-round development of treatment, teaching and research.

New Opportunity to Enhance Hard power and Soft Power

Ronggui Hospital will take advantage of building a new hospital in a new site to increase the working staff through “introduction from outside and training from inside”, encourage them to pursue higher education and win higher professional titles and reduce the workload of medical workers. The Hospital will continue to upgrade its equipment, raise diagnostic capabilities, improve clinic environment, optimize infrastructure and medical service processes, and enhance efficiency and healthcare quality. At the same time, the Hospital will constantly improve the cultural atmosphere, and take “keeping doctor-patient in harmony, benefiting all families” as purpose and “providing patient-centered, standard, safe, quality and efficient services” as the management objective. On that basis, the hospital will enhance its service awareness, and continuously improve health care quality in order to establish a good image among the masses. Also, it will further relationship management between the hospital staff and patients and improve

the loyalty of hospital medical staff and satisfaction of patients.

4.6.4 Threat (T): Threat refers to the unfavorable and negative respects to the survival and development of Ronggui Hospital against the changing external environment. If the threat cannot be averted or properly solved, it will shake or erode the position of the hospital in the market, which is an obstacle to the hospital's development.

Fierce Medical Competition

On July 1, 2010, the Shunde District First People's Hospital officially entrusted Xingtan Hospital to establish Xingtan Affiliated Hospital to the First People's Hospital of Shunde. Since then, the people's hospital has sent many experts to Xingtan Hospital, which greatly improves the medical skill of Xingtan Hospital and dilutes the patient clients of Ronggui Hospital.

From the end of 2011, twelve community health service institutions in Ronggui have been stripped out from Ronggui Hospital. Now Ronggui Hospital and community health service institutions have been independent economic entities. In Ronggui a community health service pattern featuring "the government set up the stage, the hospital sing, community and village cooperate, and the people involved" has taken shape. As currently Level-Two hospitals and community health service institutions are in conflict with each other in functions and economic benefits, stripping community health service from the hospital will definitely reduce the market share of Ronggui Hospital.

In recent years, Ronggui Hospital has become designated social insurance hospitals for Zhongshan, but according to statistics, in 2010 only 219 patients were covered by Zhongshan social security network, and in 2011 this figure was 301. As in recent years Zhongshan has paid special attention to medical care, the medical institutions there develops rapidly with an increasing medical capability. By contrast, due to unclear local policies for medical development, Ronggui Hospital develops at a much lower speed and become less attractive to Zhongshan citizens.

It is clearly put forward in the Twelfth Five Year Plan of Healthcare Development in the Shunde District that during these five years, it is necessary to expand the scale and scope of public hospitals like the Shunde District First People's Hospital, the Shunde District Traditional Chinese Medicine Hospital, the Shunde District Maternal and Child

Care Center and Wu Zhongpei Memorial Hospital to be Level-Three general or specialized hospitals. It is also necessary to expand the scale and scope of private hospitals like Guangdong Tongjiang Hospital to be a Level-Three general hospital and New Rongqi Hospital to be a Level-Two general hospital. It is planned to put in place an additional 80 clinics and nursing institutions, fifteen of them will be in Ronggui.

It is predictable that with increasing medical institutions springing up around Ronggui and the application of Guangzhou-Zhuhai intercity railway, the market share and amount of patient will be under threat, which poses more challenges for the future development.

Policy-related Loss

Ronggui government has no stable investment mechanism towards Ronggui Hospital. It invests nothing in the salary of hospital workers, but is in charge of the power over personnel and finance. Low support and many restrictions from the government lead to a limited autonomy for the Hospital, which impedes the talent introduction and daily operation of the Hospital as well as its long-term development.

With the deepening medical and health system reform, the state will phase out extra profits in drugs, which is bound to affect the Hospital's economic gains. Additionally, the application of step by step referral system to urban residents, the gradual standardization of diagnosis and treatment in medical institutions at all levels will also affect the number of patients and economic gains of the hospital.

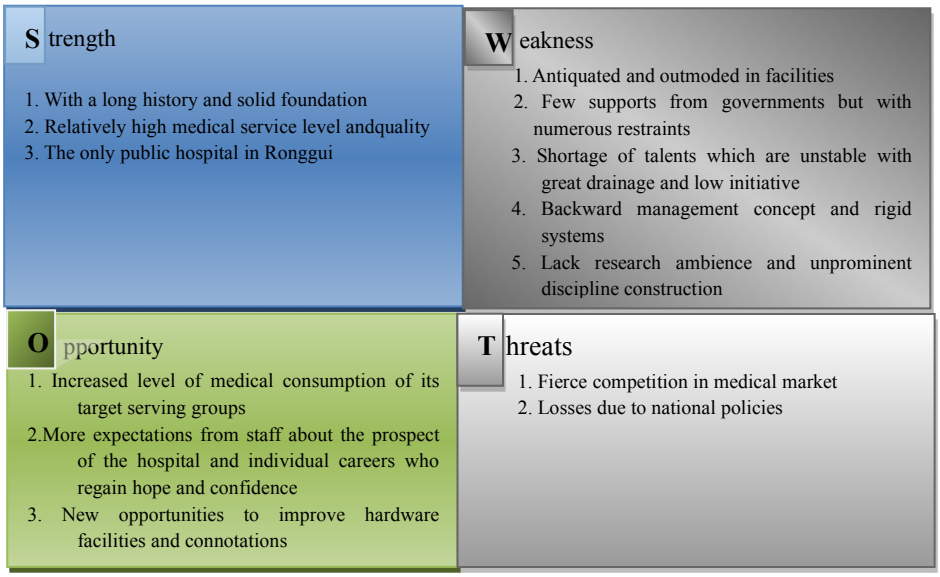

Figure 4-5 Analysis Results of Internal and External Environment of Ronggui Hospital

4.7 Selection of development strategy of Ronggui Hospital

Based on scientific analysis of its internal and external environment and proceeding from its development vision, operation philosophy and mission, Ronggui Hospital should formulate a differentiated development strategy for the next five years and how to realize the stage targets. Figure 4-6 is a flow chart explaining the strategic planning of a hospital.

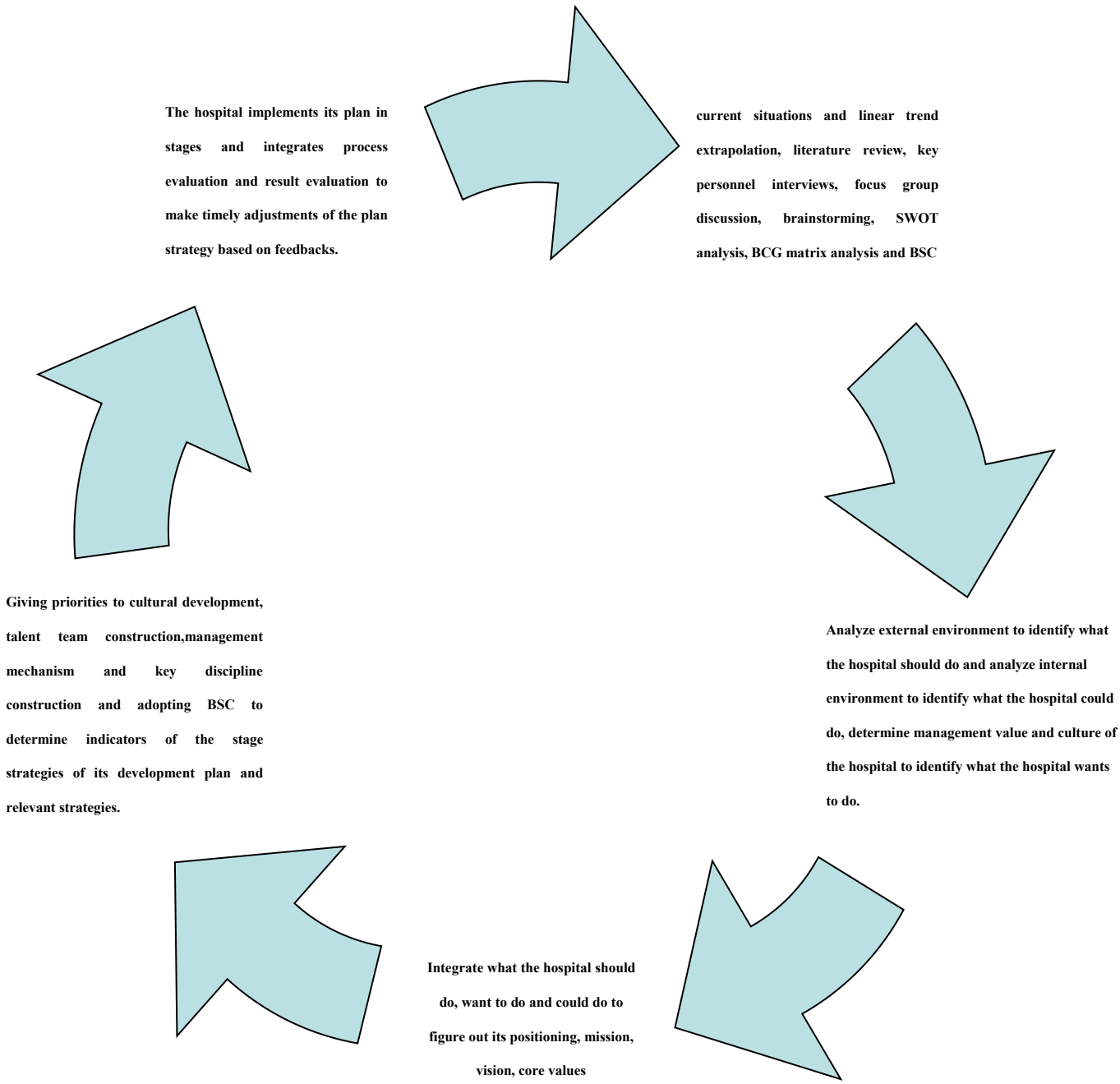

Figure 4-6

Map for selection of competitive strategy

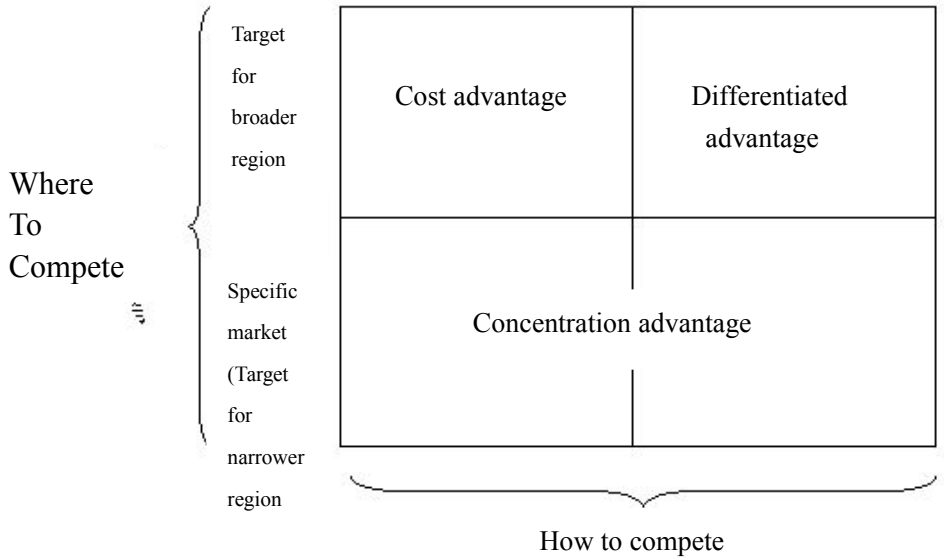

Figure 4-7

4.7.1 Selection of competitive strategy

Porter's theory includes three fundamental competitive strategies: low-cost market competitive strategy, differentiation strategy and focus strategy. Figure 7 indicates combination between how to compete and where to compete (Wang, 2005).

In the focus group interview, everyone agrees that as a general township hospital, Ronggui Hospital has a fixed service area, and it will remain so in the future. But the market of the Hospital is extensive, everyone needs medical service no matter they are men or women, poor or rich, old or young. The medical service provided by the Hospital is high value-added as the price is set by the country. But its competitor, Rongqi Hospital has transformed into a private hospital, which gives them an advantage in medical fees. Meanwhile, not a single hospital can occupy the advanced frontiers in treatment of all diseases but should parlay its strengths to form a complete medical care system. Thus, it is best for Ronggui Hospital to adopt differentiation strategy.

4.7.2 Significance of differentiation strategy

Firstly, differentiation strategy can better cater to the requirements or preferences of diverse consumers. With rapid growth our China's national economy and general

improvement of people's income, consumers not only settle for fundamental medical services but also pursue diversity and individuality, urging medical services to be more individualized apart from meeting their basic healthcare needs.

Secondly, differentiation strategy is conducive to shifting competition model of medical services. Although developing rapidly recently, China's medical service market has not experienced fundamental change. It is still characteristic of highly homogeneity in medical services, similarity in service manners and asymmetry in medical service information. Besides, the medical market is highly monopolized. However, differentiated competition can facilitate the transformation of medical service competition model from mere competition in medical technologies and medical devices to competition non-technical factors and hardware. Differentiation competition can also motivate medical service operators to expand business incomes through such non-technical and hardware competition methods as optimization of medical service quality and innovation of medical service process.

Thirdly, differentiation strategy contributes to the cultivation of the brand awareness of consumers. As brand is the "passport" for medical service to enter a market, brand awareness of consumers is an important guarantee for the long-term market presence of hospitals. Differentiated competition of medical service calls for hospital operators to meet specific requirements of consumers and to create differentiated strengths while providing medical services. In this way, operators of hospitals can better meet the demands of consumers than their opponents, which therefore, is favorable to the cultivation of the brand awareness of consumers.

Finally, differentiation strategy can enhance the efficiency of medical services. If hospitals provide identical services in similar service mode or operational procedures, low-price competition would be inevitable in the sellers' market, which would result in decreased efficiency of medical services. Medical service differentiated marketing pledges to market different medical services by giving priorities to distinctions of medical service and strives to transform the homogenous market to a heterogeneous one. Therefore, hospital operators not only can be exempt from low-price competition but also can

manipulate service differences to boost their differentiated strengths, thus contributing to the improvement of medical service efficiency.

4.8 Implementation of development strategy of Ronggui Hospital

4.8.1 Procedures of implementing development strategy

The focus group conducted in-depth exchanges with leading officials of healthcare in Ronggui and Shunde, director and deputy director, management personnel and staff representatives of Ronggui Hospital. They analyzed the trend of department revenue and the quality of personnel in the past five years. They also analyzed the trend of needs in Ronggui's medical service market. In this way, the group can understand opinion of the subjects on the Hospital's future development and the development of different departments. Based on their opinion, in the next five years (2103-2017), the differentiation strategy of hospital competition will be roughly divided into two stages.

First Stage(2013-2014): Initiative stage of differentiation strategy where differentiated effects come into being.

Ronggui Hospital should, with an aim to build a favorable cultural environment, speed up infrastructure construction, complete movement to new hospital premises and make treatment environment and medical service more amicable. It should also complement internal operation mechanisms and ameliorate performance management system and ISO9001 quality management system to make them more practicable and suitable to its actual situations, thus meeting requirements for hospital development and demands of its staff. Meanwhile, it needs to promote disclosure of hospital administration and democratic management by perfecting rules and regulations. The Hospital should also increase employee salaries and investment in personnel training by setting up more favorable platforms for their further studies and continual education. It is necessary to build talent pools of different departments with the cultivation of present talents as a dominant method and conditional introduction of advanced talents as a supplementary.

In the meantime, the Hospital should bring itself up to the standards of Level-Three general hospitals and perfect clinical expertise and setup of functional departments; it should sift out key disciplines and position their development directions, then update

facilities and devices within its capability and pool the advantageous resources to forge three to five key specialties and establish specialties of distinction so as to manufacture preliminarily a batch of “competitive products”; it should consolidate cost accounting to effectively trim down operational costs and increase economic benefits; it should inject more investment into teaching and researches; and further upgrade and consummate the construction of information systems.

Second Stage (2015-2017): Upgrading stage which adopts differentiation strategy where Ronggui Hospital develops into a brand hospital with specialty and service strengths by way of building its brand via specialty and achieving excellence via services.

Ronggui Hospital should improve department setup and infrastructure construction in compliance with standards for Level-Three general hospitals; ensure basic maturity of hospital operation mechanism, management system(internal distribution system and performance assessment system) and standardized execution; enhance cultivation of academic leaders and talent teams so as to garner achievements in key disciplines and distinctive specialty building and also to manufacture a batch of “competitive products” at hospitals, both municipal and provincial level; remarkably augment comprehensive strengths of teaching and researching to reach the requirements for Level-Three general hospital in number and quality of research projects at national or provincial level; unremittingly exploit the benefits of information construction on improving hospital operation and management as well as increasing work efficiency of its staff because information technologies have become an essential method for hospital management such as optimizing visit process by setting up queuing and calling system and patient follow-up visit system and by harnessing new methods such as telephone and network.

4.8.2 Development of hospital culture and strategy

Material Culture: From 2013 to 2014, Ronggui Hospital is committed to moderate the environment of hospital premises, upgrade service facilities for staff‘s living, ameliorating diagnosis and treatment environment and optimizing visit process. From 2014 to 2015, the Hospital aims to complete the construction of new sites in light of Level-Three hospital construction standards of the Construction Standards for the Preliminary Modernization of

Hospitals in Guangdong and places emphasis on improving its outside material culture, including accelerating hardware construction, setting up a green channel for emergency treatment,increasing the installment of devices and instruments, implementing appointment and registration system, establishing guide/reception area, setting clear labels and making the environment greener so as to create a comfortable and amicable treatment environment for patients. Meanwhile, the hospital had better actively ameliorate the working environment of its staff, setting rest rooms and dining rooms which are free from disturbances and even foster the awareness of "equal doctor-patient relationship", "putting people first" and "medical staff should be treated with respect".

Institutional Culture: Ronggui Hospital should compile rules and regulations into booklets for all staff's regular in-depth study; modify and retrench in current systems these contents (for example performance assessment system) which are incongruous with the core value system and gradually update and reinforce operation and management mechanisms on account of the requirements of management construction(for example, a third party professional team may be authorized to reconstruct the system of regulations to ensure the elements in various systems are integral and consistent as well as the systems are practical). Moreover, in order to further improve and materialize regulations and management mechanisms, leaders of the hospital should form a working quality accountability team to enhance work quality and accord gradual supervision and management on the implementation of all systems.

Spiritual Culture: Ronggui Hospital should solicit opinions from all staff and then make summaries of its history and tradition to distill the hospital motto and anthem that can better distinguish itself. The motto should indicate sublime virtues of "putting people first, solidarity and fraternity among staff and giving kindness to patients" and the anthem is supposed to reflect its mission, vision and core values. Moreover, as is said in the hospital spirit advocated to all staff for realizing requirements of the motto, Ronggui Hospital explicitly incorporates ideas of "standard, safe, high-quality and efficient services", which proves the Hospital's commitments to the government, society and citizens as well as work ethics that all medical staff should uphold.

Meanwhile, it should increase staff's sense of belonging to and identity of the

Hospital and bolster cohesiveness among staff by way of multiple methods, e.g. through such appraisal activities as setting up moral and ethic award for medical staff, award for best doctors and other activities to promote the spread of hospital culture which can not only make relations among staff more intimate but also rejuvenate its cultural ambience; regularly promote publicity of the hospital spirit, hospital values and service concepts and direct medical staff to cultivate a cultural ambience of good behaviors under the guidance of the hospital's core values; regularly carry out occupational ethics education to improve the morality of all staff, increase the content about behavior norms in personnel training to popularize superior services of good behaviors and enhance staff's awareness of providing satisfying services toward patients; pay attention to the construction of its spirit and foster good work styles; and cultivate the staff's spirits of solidarity and cooperation and accumulate invaluable human resources for its sustainable development in various channels.

4.8.3 Framework and strategy for hospital management construction

4.8.3.1 Diagnosis and treatment management construction: with respect to the current situations of Ronggui Hospital, improvement is yet to be made in the following areas:

In the case of outpatient management, a shunt mechanism should be put in place; appointment channels for common diseases, channels for critical diseases and green channels should be opened; the primary responsibility system should be established and "one-package" services provided. The length of waiting is expected to be shortened, procedures be optimized and efficiency be raised through updating facilities, reasonable adjustment of window arrangement, opening of holiday outpatient services to extend service time and restructuring of processes.

For hospitalization management, the systems of examination, diagnosis, ward rounds, consultation and case discussion should be improved; project management approach should be introduced to achieve interdepartmental communication and flexible "separation and merger"; effectives ways to treat complicated and baffling cases should be found out; and a two-way referral system with inferior medical institutions to divert away inpatients should be set up.

4.8.3.2 Organization management construction: Proceeding from the current situations, organization management should take into account the following critical elements for improvement:

It is imperative to further improve hierarchical management compatible with its positioning on the basis of its current hospital and department hierarchical management. The Hospital should carry out objective management from top to bottom, decomposing objectives in the manner of responsibility memo and emphasizing on effective execution of management systems, ensure consistency among top managers for hospital development, continue to implement competitive system for middle-level vacancies and make its selection more transparent and just, enlarge authorities of middle-level managers and ensure their necessary authority in human resources and decision-making, and launch management training for middle-level managers to guarantee its continuity.

It should enforce openness of hospital administration and promote scientific management; invite executive functional departments to attend conferences of clinical departments and formulate hospitalization general conference system to enhance the role of executive functional departments in serving clinics and boost communication efficiency between managers and ordinary staff.

Competent professionals in hospital management and human resource management should be recruited to realize professional management, engender “catfish effect” inside the Hospital and arouse the initiative and enthusiasm of the staff.

The principle of “vacancy set for demands and personnel selected for vacancy” should be abided by and detailed job analysis should be conducted in line with hospital development, with unnecessary jobs rescinded or merged and gaps filled.

The Hospital should endeavor to change the system of making opportunities of promotion available to all regardless of their competence, set out eligibility conditions for application of internal professional titles and link promotion with research and business of individuals so as to keep employees motivated and guarantee the pyramid-shaped talent team; and draw strict demarcation between titles and executive posts so as to eliminate exercises of executive function by titles.

4.8.3.3 Performance management construction: In light of the current situation of the Hospital, essential areas calling for improvement are as follows:

The Hospital should avoid misunderstandings that performance assessment is equivalent to performance management, stay true to the idea of deriving performance from management rather than promoting performance via evaluation, vest emphasis in feedbacks of information communication and performance improvement and further modify evaluation factors and evaluation methods of its current performance assessment system.

An top-down objective decomposition system should be set up, which runs from hospital objective down to department objective and individual objective. And a bottom-up performance warrant system should be established, which proceeds from individual performance, department performance to hospital performance.

A performance assessment and salary system based on comprehensive performance and post performance assessment should be put in place which mainly attends to service quality and workload of the post, therefore effectively sparking initiatives of the medical staff.

Performance assessment should be linked with incentives and restraint mechanism and incentive measures should go beyond mere economic incentives.

4.8.3.4 Quality management construction: With regard to the current situation of the Hospital, essential aspects of quality management calling for improvement are as follows:

Establish an “expert committee” to carry out internal quality appraisal;

Make great endeavors to reinforce nursing quality;carry out relevant requirements of the Ministry of Health for superior nursing services;and further upgrade clinical nursing quality, vigorously develop specialty nursing and explore in-depth clinical nursing with fundamental nursing as the framework and specialty nursing as the content in accordance with the standards set in Measures of Implementing the “Demonstration Projects of Quality Nursing Services” of Guangdong Province and the Guidelines to Quality Assessment of Hospital Care in Guangdong Province.

4.8.3.5 Cost management construction: In light of the current situation of the Hospital, essential aspects that need to be improved include:

Establishment of a total cost accounting system which is currently based on department statistics and accounting should develop toward disease accounting and medical project accounting along with the promotion of clinical routes and clinical project management.

4.8.3.6 Information management construction

Ronggui Hospital should enhance its staff's understanding of, and emphasis on,the information platform, place hospital information system construction at the core of hospital management and set up a platform buttressed by critical information and data for decision making.

Information management should be phased into medical administration, medicine management, logistics operation, performance assessment and medical care quality control of departments of hospital administration and serve as the guide for departments to advance fine management. Meanwhile, Ronggui Hospital can promote its information construction through evaluations and feedbacks from various departments, thus building itself into a digitalized hospital.

4.8.4 Framework and strategy for medical discipline construction

Bed installment: Since numerous factors come into play for increase of the Hospital's business and beds, this study adopts linear trend extrapolation method to make a rough calculation of its business volume and corresponding bed increase in the following ten years. (See Table4-23)

Table 4-23 Linear Trend Extrapolation of Increase of Beds and Business of the Hospital

Year	Visits	Admittances	Number of Physical Examinations	Number of beds
2012	1323835	17412	98367	510
2013	1431462	18119	105351	531
2014	1547840	18855	112831	553
2015	1673680	19620	120842	576
2016	1809750	20417	129422	600
2017	1956882	21246	138611	625
2018	2115977	22109	148452	651
2019	2288006	23006	158992	678
2020	2474021	23940	170281	706

Note：Prediction of the number of beds is based on actual number of beds available

All things considered, Ronggui Hospital should increase the number of beds to at least 600 by 2015 so as to meet the requirements for business development. Meanwhile, the Medical Institutions Setup Plan During the “Twelfth Five-Year Plan” in Shunde District Foshan City states that the intended number of beds of Ronggui Hospital is 700. Therefore, the hospital can choose to increase fifty to one hundred beds in line with business development.

Staffing: In accordance with the 1:1.6 staffing standard and in line with the staffing principles of Level-Three general hospitals, there should be a total of 960 personnel in Ronggui Hospital and 1200-1280 by 2020, which does not include workers of logistics.

In accordance with the requirements put forward in the Implementation Regulations on Appraisal Standards of Level-Three General Hospitals (2011), ratio between healthcare technicians and beds should not fall short of 1.15:1 and technicians should account for over 70% of the total staff. Therefore, healthcare technicians of Ronggui Hospital should reach at least 690 by 2015 and 862-920 by 2020.

In accordance with requirements put forward in the Implementation Regulations on Appraisal Standards of Level-Three General Hospitals (2011),the number of nurses should at least take up 50% of that of all healthcare technicians. Moreover, in line with the standard of the ratio 0.6:1 between the number of nurses to that of beds, there should be

360 nursing staff by 2015 and 450-480 by 2020. Meanwhile, the Hospital should guarantee the internal infrastructure of staff in compliance with relevant regulations: the ratio among the number of doctors with high-grade titles, that with deputy high-grade titles, that with intermediate-grade titles, that with preliminary titles should be 1:3:5:7; the ratio between the number of intensive care doctors and that of nurses, and that of beds should be respectively no less than 0.8:1 and 2.5:1-3:1; senior nurses should make up no less than 30% of the total nursing staff; the number of clinical nutrition specialists should not be less than 2; engineering technicians should comprise no less than 1% of overall healthcare technicians. Besides, the Hospital can moderately increase management and logistics staff according to requirements from the management.

With the First People's Hospital of Shunde as the benchmark, this study estimates that by the end of 2015, there should be over 6%(n=58) in-service staff with master degrees, over 50% (n=480) with bachelor degrees and over 8.5% (n=82)with high-grade titles or deputy high-grade titles, among which over twenty are conferred high-grade titles. The building of human resources should attend to complementarities and inter-dependence among talents, thus forming a talent chain characteristic of complementarities in expertise, age and interconnectedness.

Facility installment: Ronggui Hospital should divert more investment in light of the requirements for business development and the "Twelfth Five-Year Plan" to gradually upgrade facilities. During the first stage (from 2013 to 2014), Ronggui Hospital should update the present devices that have depreciated, complete facility installment for newly established departments and equip departments that have competitive advantages with sophisticated devices in line with the Grade-Two hospital standards of the Hierarchical Management Standards of General Hospitals. At the second stage(from 2014 to 2015), in line with the Level-Three hospital standards of the Hierarchical Management Standards of General Hospitals, Ronggui Hospital should realize increased installment of devices and allocation of devices for new departments, and meanwhile orderly update devices of departments so as to reach the device installment standards for Level-Three general hospitals.

Planning on housing for business purpose: Ronggui Hospital should complete the construction of the new site by the end of 2014; properly allocate houses for various purposes and houses for business purposes of all departments; give precedence to guarantee house use of such advantageous departments as the Emergency Department, Outpatients and Inpatients as well as departments with great potential. All in all, it should map out the plan from comprehensive deliberation to facilitate patient visits, hospital cost control and hospital business expansion.

Department setup: With reference to the Level-Three hospital standards of the Hierarchical Management Standards of General Hospitals,Ronggui Hospital should standardize department setup through streamlining, merger and addition in the following two to three years, including adding department of interventional radiology and department of anesthesia; upgrade Department of Dermatology and Department of Tumor to the First-Level specialty departments; add Department of Circulation, Department of Hematology, Department of Plastic Surgery and Department of Abdominal Surgery in Second-Level specialty departments; build ICU and CCU; add Department of Imaging Diagnosis, Department of Nuclear Medicine, Department of Physical Diagnosis and Chamber of Endoscopy to the Department of Medical Technologies; and add Chamber of Statistics, Laboratory and Chamber of Cases to other departments.

To respond to its future positioning and development requirements as well as push forward development of disciplines, Ronggui Hospital should restructure the existing model with Second-Class disciplines as mainstay and establish three levels of departments (such as general surgery) to empower the Third-Level departments to become the smallest units of independent operation and economic accounting .

Construction of key departments: The major difficulty of Ronggui Hospital is to push forward the development of its key departments, which can fundamentally lead and promote medical treatment, teaching and research of the Hospital. Based on the result of BCG matrix analysis, the Hospital should give priority to advanced subjects, mature subjects and promising subjects, and focus on building up three to five key departments in the next three years on the basis of the strategic plan. It is worthwhile to note that the Orthopedic Surgery Department has established long-term cooperative relations with

Peking Union Medical College Hospital, Zhongshan University and Guangzhou Medical College. Trauma is one of the major diseases which Ronggui Hospital can make diagnoses and give treatment. Therefore, giving priority to the Development of Orthopedic Surgery can help ensure the effectiveness of the construction of key departments in a the short term.

Painless fibro-bronchoscopy conducted by respiratory department has taken the lead in Foshan City. This department is equipped with advanced pulmonary function test apparatus and possesses leading treatment technology for bronchial asthma and chronic obstructive pulmonary diseases with a number of experienced experts. Meanwhile,respiratory disease is one of the major diseases which Ronggui Hospital can make diagnoses and give treatment. Moreover, it is also one of the major chronic diseases which can impact human being's health. Thus, the promising respiratory department should be given full support to complete the construction of key departments as soon as possible.

Currently, the Nephrology Department has three experts with associate senior professional title or above. On the one hand, renal dysfunction causes a high incidence of disease. On the other hand, renal transplantation is difficult to conduct.Accordingly, this kind of patients have increasingly higher demands for hemodialysis technology despite the fact that hemodialysis technology has improved rapidly in recent years. In addition, perfusion technology and plasma exchange technology have played an important role in rescuing acute poisoning and uremia. All of the above-mentioned technologies mastered by Ronggui Hospital are at the leading level in Shunde District and even in Foshan City.With strong development potential, the nephrology department should be included in the list of key departments.

According to the structure of human diseases and major types of diseases the Hospital deals with, a majority of patients of our hospital suffer from chronic non-communicable disease. At the same time, with the coming of the aging society, the number of patients with cardiovascular disease, diabetes and hypertension will increase gradually. Furthermore, an increasing number of people are paying attention to health care because of the socio-economic development and the people's strengthened awareness of health. So Ronggui Hospital needs to continuously raise the level of diagnosis and

treatment and service quality of cardiovascular disease, diabetes and other chronic non-communicable diseases. It may also consider strengthening its sub-important departments such as the Department of Cardiovascular Internal Medicine as well as that the Department of Incretion Internal Medicine.

Having integrated medical treatment, health care, teaching, pediatric emergency, the Pediatrics Department is a multifunctional department that has fifty beds and other advanced equipment. It also has an excellent team which has rich clinical experience, strong expertise and favorable research ability.Six of the members are associate chief physicians and four are attending physicians. The paramedics' quality of nursing services is very high. They are widely praised by the masses and have received extensive social recognition because of their positive working attitude. As an important industrial manufacturing base in the Pearl River Delta, Ronggui creates many job opportunities and attracts a large number of migrant workers. According to statistics, Ronggui had served a population of approximately 600,000 by the end of 2011, when the number of permanent residents was 465,000 and migrant population was 135,000. However, young workers between fifteen and 45 years old are the mainstream of migrant population. Besides, considering that couples are more likely to be on the move together, the development of pediatric has been facilitated to some extent. Thus, the pediatrics department should be included in the list of key departments.

In addition, Ronggui Hospital's Medical Examination Center is the only medical institution in Ronggui Street qualified for making occupational health examinations for factories, enterprises and public institutions. There are more than 20,000 enterprises as well as individual business owners in Ronggui, including over eighty ultra-billion enterprises like Glanz, Hisense Kelon and Wanhe. The huge market ensures the long-term development of the Medical Examination Center. Therefore, Ronggui Hospital should vigorously strengthen the construction of qualified personnel and improve the skills and quality of the Medical Examination Center during the Twelfth Five-Year Plan period.

Ronggui Hospital should try to make sure that the first batch of key departments meet provincial standards or above. Then, it should establish other clinical departments in line with the municipal and hospital-level standards. After comprehensively analyzing regional hospitals, people' demands for healthcare, types of diseases and changes of medical environment in the future, Ronggui Hospital is recommended to develop Department of Endoscopic Surgery, Emergency Department, Urinary Surgery Department, Pediatrics Department and Neonatal Department to municipal priority departments, and Oncology

Department, Department of Rehabilitation through traditional Chinese medicine, critical care medicine, Ophthalmology Department and Otorhinolaryngology Department to hospital-level priority departments. By the end of the Twelfth Five-Year Plan, Ronggui Hospital should have a clear priority department system set up, which is led by provincial key departments or above and focuses on municipal and hospital-level key departments.

Construction of general departments: The "entrepreneurial departments" defined by BCG matrix and other medical departments cannot be abolished in accordance with relevant provisions of Ronggui Hospital. But they can be appropriately downsized to reduce hospital operating cost.

Human resources and environment support for constructing special departments: Because of hardware equipment constraints and limited salary, it's hard for the Hospital to develop departments by introducing a large number of leading academic professionals in a short time. But it may cooperate with well-known hospitals within the field and invite experts of other hospitals to give medical service at intervals and provide guidance for clinical practice and research. It can also send key personnel to learn from other hospitals to improve the quality of medical services and nurture experts within the Hospital. In addition, it also can unite internal hospital departments, such as association between strong departments, to build up departments with distinctive characteristics. When the Hospital has held a certain level of comprehensive strength, it can introduce or nurture healthcare technicians as needed.

Ronggui Hospital should always adhere to the principle of "developing theHospital through science and technology", increase investment in software and hardware equipment for teaching and research, train high-quality medical personnel through teaching and research, and provide further environment support to construct special departments. Moreover, through detailed management of special departments and strengthened "brand establishment", Ronggui Hospital should provide a platform for young and middle-aged talents to grow and show themselves, and shape the pattern of department construction characterized by "key departments, departments with distinctive features and personnel with special skills".

Information Construction: The development of hospital information construction is one of the important signs of realizing modern management and medical service. Sound information construction can help ease the burden of medical staff, improve working performance, optimize service procedures, shorten length of waiting and bring convenience to patients. According to the target positioning put forward in the Mid-Term

Five-Year Development Plan, Ronggui Hospital needs to further increase investment in information technology, construction of some projects mainly based on hospital information management systems, medical image transmission and storage system and clinical information system, and lay stress on data security, integration, sharing, exploitation and in-depth analysis. In addition to achieving electronic seamless connectivity within the Hospital and office automation, Ronggui Hospital should also create a set of reasonable, multifunctional platform for network infrastructure, systematic application and data collection and storage. In the end, Ronggui Hospital should fully realize digital information collection, storage, transmission and handling of medical teaching, research and management data, and work with other hospitals for data exchange and sharing to digitalize its services and management procedures.

In recent years, regional healthcare informatization has become very popular. At present, Foshan City is building intelligent health care system named “Healthy E Net”. Against this backdrop, Ronggui Hospital should increase investment in information construction, and conduct it in three steps: first, perfect the residents’ health information management system which has been created already but not put into routine application yet. At the same time, it should upgrade the information systems being used and take the best advantage of it; second, establish a calling & queuing system and a patient follow-up system so as to make appointments by calling or Internet to triage patients and save queuing time and realize integration of information within the Hospital;third, following steps of Foshan City’s intelligent health care system, Ronggui Hospital should establish an information system of clinical pathways, clinical medication and pharmaceutical logistics and strengthen the management of information system for diseases control and prevention, such as information system for tumor, diabetes and cardiovascular diseases. What’s more, it should gradually establish a telemedicine consultation system, a comprehensive transferring consultation system and other advanced information systems for diagnosis and treatment to simplify service workflow, ease the burden of staff, reduce hospital operating costs, increase management efficiency and improve service quality and the level of diagnosis and treatment to enhance the core competitiveness of the Hospital.

Development of research and teaching: In order to continuously improve the level of medical technology and become a Level-Three hospital, Ronggui Hospital should increase investment in research and teaching in the next three years, and improve the quality of research and teaching according to the following aspects:

The Hospital should strengthen exchanges and cooperation with SunYat-sen University, Southern Medical University, and other advanced medical research institutes at home and abroad, taken an active part in different levels of academic activities, and enhance hospital teaching and research capacity;

The Hospital should establish special funds for research, give support to medical staff to apply for scientific research projects and encourage them to publish research papers.

Ronggui Hospital should grow into a learning-oriented hospital, and standardize consultation system, ward round system and case discussion and learning system to foster a strong learning and research environment.

To keep up the research capacity of the Hospital with the world trend, it should establish an excellent training system, especially for paramedics, directors of clinical departments, academic leaders and all levels of managers, and offer enough opportunities for department directors and academic leaders to study abroad.

4.8.5 Main indicators for strategy implementation assessment

This study, based on comprehensive consideration of the internal strengths and weaknesses of Ronggui Hospital, external opportunities and challenges, development orientation in the period of Twelfth Five-Year Plan, the specific application of the balanced scorecard, has set up corresponding assessment indicators for the Hospital's development in the next five years through a strategic analysis of financial status, patients, internal procedures as well as learning and growth.

Table 4-24 The Measures in Different Phases &Main Indicators

Dimensions	2013		2014	
	Measures	**Main indicators**	**Measures**	**Main Indicators**
Financial Status	1. Reduce the ratio of medicine income to business income, and keep high bed utilization ratio, turnover rate, and low per capita outpatient cost; 2. Make better cost assessment system, strengthen financial management and improve capital utilization; 3. Reduce asset-liability ratio and improve the hospital's solvency.	1.The ratio of medicine income to business income≤40%; 2.The asset-liability ratio≤50%, the ratio of revenue and expenditure surplus to gross income≥5.5%, and growth rate of business income≥10%; 3. The serviceability rate of medical equipment≥80%.	1. The government should enlarge financial investment and provide policy support to improve infrastructure and equipment configuration. 2. Make cost estimating and revenue management for the purchase of medical equipment.	1. The ratio of medicine income to business income ranges from 35% to 40%. 2.The asset-liability ratio < 50%, the ratio of revenue and expenditure surplus to gross income≥6%, and growth rate of business income≥15%; 3.The serviceability rate of medical equipment≥80%, and the file archiving rate of medical equipment of ten thousand yuan or more should be 100%.
Patients	1. Optimize the treatment environment entirely, replace the equipment and perfect infrastructure construction; 2. There should be more publicity to improve brand effect of the hospital; 3.Health care costs should be controlled and the transparency of charges needs to be increased; for the convenience of the patients, medical service process should be improved to save patients' time for receiving treatment; 4. The residents' health information management system needs to be improved.	1. Clear and convenient clinics signs; 2. The number of people who are waiting for registering, paying and medicine obtaining should be no more than 15, and the waiting time for receiving treatment should be no more than 30 minutes; 3. The overall rate of patient satisfaction ≥75%; 4. The hospital shall publicize the fees for medical services and medicine prices in line with related regulations.	1. while strengthening the concept of people-oriented, the hospital should continuously improve the entire environment and medical service process; 2. The hospital offers high quality and individual service to avoid the phenomenon of "long waiting time in registration, paying and drug obtaining and short time in diagnosis and treatment"; 3. To reduce the burden on patients, the hospital need to lower the costs for medicine and healthcare; 4. Calling & queuing system needs to be established.	1.The number of people who are waiting for registering, paying and medicine obtaining should be no more than 15, and the waiting time for receiving treatment should be no more than 30 minutes; 2. The average medical cost of mono-disease should not exceed the cost in hospitals of surrounding towns, and the average outpatient medical cost of every patient should not exceed the cost in hospitals of surrounding towns; 3. The rate of patient satisfaction≥80%.

Internal Operation	1.Taking priority departments and specialties as core, the hospital should cultivate academic leaders and key members of departments by introducing external talents and cultivating internal talents; to optimize the organizational structure, the system of director or dean-in-charge and comprehensive target responsibility system should be established; 2. The construction of professional departments which are related to hospital's target and function should be improved. 3. The hospital needs to strengthen modern management philosophy and improve performance assessment mechanism; 4. The culture of hospital needs to be refined.	1. Three to five priority departments and specialties should be defined; 2. The number of beds should amount to 510, and their utilization rate≥85%; 3. The per capita owning rate of computers ≥35%, and the high-speed broadband computer network which focuses on exchange and electronic publications are also needed.	1.Perfect the equipment configuration of priority specialties to improve and enhance the core competitiveness of priority departments; 2.KPI based performance assessment mechanism needs to be improved continuously and distribution& incentive mechanism needs to be reformed, such as pay more attention to key positions as well as key talents; 3. While strengthen the people-oriented service concept,, the culture of hospital needs to be refined continuously.	1.The municipal priority departments≥1, and hospital-level priority departments≥1; 2.The number of beds at regular service should reach to 530, and their utilization rate≥85% ; 3. The per capita owning rate of computers≥40%; 4. The nosocomial infection rates≤8%, and the incidence rate of serious accidents of every 100 beds＜1%.
Learning and Development	1.The hospital needs to improve working environment, employee benefits and strengthen exchanges and collaborations among departments; 2.The hospital needs to establish a two-way cooperative relationship with domestic famous hospitals, universities and research institutions; 3. The hospital needs to introduce external top talents and cultivate top internal talents, and reinforce to train all kinds of personnel, especially the training of paramedics and key staffs; 4. The hospital needs to cultivate and train graduate students, undergraduates and advanced students.	1.The total number of staffs≥816, medical technicians≥587, paramedics≥310, the ratio of doctors to nurses is1:2, and clinical dietitian should be no less than one people; 2.The ratio of postgraduates≥4.5%(37), undergraduates≥35%, and the number of PhD holders≥1; 3. The number of papers which are published in domestic core journal≥20, the number of provincial research projects or above≥1, and municipal research projects or above≥15; 4. More than 20 undergraduates, 50 advanced students should be cultivated every year; 5. The rate of overall satisfaction from employees≥40%.	1.The hospital needs to strengthen the building of talent team, and optimize the structure of ages, qualifications and positional titles; 2.The hospital needs to start the work of research and teaching, and create an atmosphere of research and teaching; 3.The hospital needs to provide the staff with more opportunities for foreign exchange so as to inject new ideas into the hospital and stimulate staff's work enthusiasm and initiative; 4.By deepening core values, the hospital should put emphasis on teamwork, employee loyalty and a sense of belonging;	1.The total number of staffs≥848, medical technicians≥530, paramedics≥320, the ratio of doctors to nurses is1:2; 2.The ratio of postgraduates≥5%(43), and the number of PhD holders≥1, the number of staffs with senior professional title≥85, and senior doctors≥12; 3. The number of papers which are published in domestic core journal≥3, the number of papers which are published in overseas core journal≥1; 4.The number of provincial science and technology advances or above≥2, and municipal research projects or above≥17 5. More than 20 undergraduates, 50 advanced students should be cultivated every year; 6. The rate of overall satisfaction from employees≥60%.

Dimensions	2014		2015	
	Measures	**Main indicators**	**Measures**	**Main Indicators**
Financial	1. By the end of this year, the hospital should move to the new location, the construction of parking lot should be finished, and government should increase investment; 2. The hospital should improve business revenue and optimize gross incomes structure continuously; 3. The hospital should reduce operating costs, and optimize business revenue structure.	1.The ratio of medicine income to business income＜35%; 2.The asset-liability ratio＜45%, the ratio of revenue and expenditure surplus to gross income＞8%, and growth rate of business income＞15%; 3.The file archiving rate of medical equipment of ten thousand yuan or more should be 100%, and the networking rate of medical equipment≥60%.	1. The government should continue to assume its responsibility of enlarging financial investment to improve infrastructure and equipment configuration. 2. Make better cost estimating system to save costs and enhance asset utilization.	1. The ratio of medicine income to business income＜35%. 2.The asset-liability ratio＜45%, the ratio of revenue and expenditure surplus to gross income＞10%, and growth rate of business income＞15%; 3. The serviceability rate of medical equipment of ten thousand yuan or more≥95%, and the networking rate of medical equipment≥80%.
Patients	1. The patients follow-up system should be established, and the hospital should continue to care and nurse discharged patients; 2. The appointment mechanism should be established and carry out appointment service through network, telephone and other new methods; 3. The health education and promotion for in patients should be enhanced.	1. The number of people who are waiting for registering, paying and medicine obtaining should be no more than 15, and the waiting time for receiving treatment should be no more than 30 minutes; 2. The follow-up rate of discharged patients≥50%; 3. The coverage rate of health education for in patients≥85%; 4. The rate of patient satisfaction ≥75%; 5. The ratio of intensive care beds ranges from 2% to 5%.	1. The hospital should increase publicity to improve brand effect and expand market share; 2. The hospital should perfect calling & queuing system and appointment system to save patients' waiting time, improve medical care availability and increase the rate of patient satisfaction; 3. The hospital should continue improving medical care availability to reduce the burden on patients.	1.The number of people who are waiting for registering, paying and drug obtaining should be no more than 10, and the waiting time for receiving treatment should be no more than 25 minutes; 2. The follow-up rate of discharged patients≥60%; 3. The coverage rate of health education for in patients≥95%; 4. The rate of patient satisfaction ≥85%; 5. The time for nurses reaching to patients should be within three minutes.
Internal Operation	1.The hospital should make great efforts to construct and consolidate specialties; 2. To improve the level of technology and quality of service, the hospital should optimize organizational structure, and comply with the health care system, medical technology and regulations. 3. The medical library of the hospital should contain sufficient medical books and journals; 4. Special department should be established to manage patients care procedure; 5. While enhance the construction of information technology, the hospital should start to build information systems for medicine logistics and clinical medication.	1. National-level priority departments or provincial priority departments≥1, and municipal priority departments≥2; 2. The number of beds should amount to 510, and their utilization rate ranges from 85% to 93%; 3. The nosocomial infection rates≤10%, the average hospitalization days≤18, and the rate of hospital beds turnover≥20 times/day; 4. The hospital has sufficient medical books and journals in Chinese or foreign languages.	1. The hospital should enhance the construction of priority departments, optimize organizational structure, optimize various management systems, conduct performance assessmentmechanism, and perfect salary distribution system; 2.The medical technology and service quality needs to be improved by continuously constructing talent team because qualified personnel can improve the quality of departments and excellent departments can improve the quality of hospital; 3. While building and perfecting the information systems for medicine logistics and clinical medication, the information system for disease prevention and control needs to be enhanced as well.	1. National-level priority departments or provincial priority departments≥1, the municipal priority departments≥4 and hospital-level priority departments≥3; 2.The number of beds at regular service should reach to 600, and their utilization rate ranges from 85% to 93% ; 3. The nosocomial infection rates≤10%, and the infection rate of surgical incision≤0.5%; 4. The average hospitalization days≤20, and the rate of hospital beds turnover≥17 times/day.

Learning and Development	1.The hospital should keep on cultivating and introducing strategic talents, and pay attention to train academic leaders to improve the quality of talent team, such as, introduce talents who are good at modern hospital administration to realize “Catfish Effect” and build a learning organization; 2.The hospital needs to promote research and teaching works and take part in international academic exchange activities actively; 3. The hospital needs to perfect the construction of teaching base to provide professional guidance and training for subordinate medical institutions within the region.	1.The total number of staffs≥896, medical technicians≥644, paramedics≥340, the ratio among senior doctors, associate senior doctors, intermediate-level doctors and primary-level doctors should reach to 1:3:5:7; 2.The ratio of postgraduates≥8%(72), the number of PhD holders≥3, and the number of staff with senior professional title≥92, and the number of senior doctors≥17; 3. The number of managers with more than 2 years working experience or staff with postgraduate qualifications≥1； 4. The number of national-level papers ≥5, the number of papers that published in domestic core journals≥130, the number of papers that published in overseas journals≥2 and the number of provincial research projects or above≥4; 5. The hospital should anticipate academic exchange at least once a year, besides, more than 6 postgraduates, 30 undergraduates and more than 50 advanced students should be cultivated every year; 6. The rate of satisfaction from employees≥70%.	1.The hospital needs to improve service philosophy, medical technology, enhance the service philosophy of patient-centered, improve treatment environment, increase benefits, perfect incentive system and improve employee’s satisfaction rate; 2.The hospital needs to vigorously increase investment in research and teaching, talents introduction and material assets to promote the ability of research and teaching and participate in large-scale academic conferences at home and abroad; 3.The hospital may keep on the method of introducing external talents and cultivating internal talents to improve the overall quality of the staff, meanwhile, to perfect talents team, and ensure that research brings up talents, talents improve the quality of departments and the department improve the quality of hospital.	1.The total number of staff≥960, medical technicians≥690, paramedics≥360; 2.The ratio of postgraduates≥10%(96), and the number of PhD holders ≥5, the number of staff with senior professional title≥100, and senior doctors≥23; 3. The number of papers which are published in overseas journals≥1, the number of national-level papers ≥10, the number of Class-II National Science and Technology Progress Award or above≥1, the number of Ministry, Commission or Provincial-Level Science and Technology Progress Award≥2 and the ratio of winners who participate in research design and actual study≥30%; 4.The hospital should anticipate academic exchange at least once a year, besides, every year more than 10 postgraduates should be cultivated and the pass rate of residency training should reach to 100%; 5. The rate of satisfaction from employees≥85%.

4.8.6 Major construction projects and appropriation budget

According to the development plan and implementation steps, this paper has given a detailed description of major construction projects and appropriation budget in four implementation phases: 2013, 2014, 2015, and 2016(Table 4-25)

Table 4-25 Major Construction Projects and Appropriation Budget in Four Implementation Phases of Ronggui Hospital (Unit: Ten Thousand Yuan)

2013		**2014**	
Project Content	**Appropriation Budget**	**Project Content**	**Appropriation Budget**
A better treatment environment: it's necessary to improve treatment environment and staffs' living facilities, and set waiting seats for patients.	50	A better treatment environment: the hospital removing should be done, and service procedure should be simplified.	30
Beds and auxiliary facilities: an additional 20 beds are needed, and ICU beds should account for 2% to 5% of all beds.	300	Beds and auxiliary facilities: an additional 20 beds are needed, and ICU beds should account for 2% to 5% of all beds.	300
The replacement and purchasing of equipment: according the standard of Class-II general hospital, the equipment which has exceeded the depreciation period needs to be replaced and additional equipment needs to be replenished for different departments.	1000	Equipment configuration: according to requirements of different departments, the hospital should improve the equipment configuration gradually and take dominant departments as priority to constantly improve the level of hospital treatment.	1500
Construction of priority departments: the first batch of municipal & hospital-level dominant departments, including the introduction of academic leaders and new technology as well as the improvement of human resources construction and equipment configuration needs to be built.	1000	Construction of priority departments: while consolidating and developing the first batch of dominant departments, the hospital should improve the discipline of qualified personnel, equipment configuration, and bed configuration and focus on introducing advanced technology and talents.	2000
Information construction: it needs to perfect the residents' health information management system and put it into use, besides, upgrade the system in use.	200	Information construction: queuing & calling system, management information system and clinic information system need to be established, and it's necessary to realize of per capita owning rate of computers≥40%.	1000
Ronggui Hospital will invite hospital management experts to train senior managers in the management conception of modernized hospitals, and also clinic experts of big hospitals to give lectures and clinic guidance, in the end, promising key staffs will be selected to engage in advanced studies.	500	Perfect management system: KPI based performance assessment as well as distribution& incentive mechanism need to be improved continuously, such as pay more attention to key positions as well as key talents.	100
Total Amount: 217,300,000 yuan	3050		4930

2014		2015	
Project Content	**Appropriation Budget**	**Project Content**	**Appropriation Budget**
Construction of treatment environment：firstly, convenient facilities needs to be constructed, such as guidance area and waiting room to show humanistic service; then, the environment should be safe, healthy, comfortable and adorable; and, the ratio of green area to total area should be greater than 35%.	1000	Both treatment environment and service procedure needs to be improved continuously.	500
Equipment and auxiliary facilities: the resources of equipment, manpower, beds and so on should be allocated in line with the standard of Level-Three general hospital.	4000	Beds and auxiliary facilities：the beds number can reach to 40, and ICU beds can also be added, but its number should be no more than 8% of all the beds.	1000
Construction of priority departments: to help apply for national-, provincial priority departments, the academic leaders of dominant departments, talent team, high-tech equipment, beds configuration and key laboratories should be perfected.	2500	Personnel training and introduction: the hospital will increase investment in continuing education, advanced studies, participation in international academic exchanges and other trainings for staff; in addition, it will introduce highly skilled clinic experts as well as hospital management talents and strengthen human resources construction.	500
Building a learning organization: the hospital will introduce as well as cultivate its own high-quality personnel, send managers to visit and learn from model hospitals, and invite clinic experts to provide medical service and give lectures;	300	Construction of priority departments: the hospital should constantly improve the level of medical technology and quality of service by consolidating and developing specialties construction;	1500
Information construction: the system of telephone, online booking service should be established, and start to build medicine logistics, clinical medication information systems, besides, the hospital should own enough electronic publications.	800	Construction of institutional culture: except improving cost accounting system and hospital efficiency, the hospital will invite a third party organization to set management system separately,such as performance appraisal system;	150
		Information construction: on the one hand, medicine logistics, clinical medication information systems need to be built, and disease prevention and control information system needs to be enhanced, on the other hand, electronic seamless connectivity within the hospital needs to be achieved, and information system of diagnosis and treatment needs to be created.	1500
Total Amount	8600		5150

Chapter 5: Conclusion and Implications

In this chapter, implications of the present research are pointed out. Limitations and suggestions for further research are lighted upon for future reference.

5.1 Conclusion

This paper analyzes the challenges and development pressure Level-Two hospitals (county-level) are facing under the background of the new healthcare reform. Strategic management tools, including theory, concept and nature are employed to analyze Ronggui Hospital as a case study. On this basis, conclusions of the macro environment of the medical market, the advantages and disadvantages of hospitals and utilization of resources are made to serve as a reference to the formulation of market competition strategies. Having compared and analyzed the Hospital's competitive factors, this paper puts forward differentiation strategy which has been decomposed and elaborated on according to the hospital's actual situation with the aim of offering valuable reference to the formulation of market competition strategies for Level-Two hospitals.

5.2 Contribution

From the perspective of the Hospital's management, this paper studies what kind of market competition strategy can be used by Level-Two hospitals economically and practically, how to turn pressure brought by the new medical reform into a driving force and opportunities for development, how to enable that it takes effect in the market in a short time so that patients can receive better medical services.Through strategy establishment and implementation, the following six aspects which should be improved and strengthened in the context of the new healthcare reform are summarized:

5.2.1 Improve medical treatment technologies.

The latest health care reform puts funding county-level hospitals as a priority. More importantly,it increases subsidy for patients to access medical services, significantly reducing their financial burden. Therefore, charges for medical services will exert less influence on

patients' choice of getting medical services. And in contrast, medical service treatment techniques will play a bigger role. In this sense, the health care reform is both an opportunity and a challenge for county-level hospitals. If they improve their techniques, they will get on the track of healthy and sustainable development. Otherwise, they will find it difficult to develop.

First, new services should be provided and new techniques be employed. Medical workers at the grass-root level should, according to their own skills and service features, conduct more research on commonly encountered diseases, frequently encountered diseases and endemic diseases, and improve their techniques. This is because treatments of these diseases are the core services hospitals provide and will dominate the medical market in the future.

Second, county-level hospitals should set up mechanisms to encourage and support medical staff to learn, conduct research on and apply new business skills and techniques and rely on technical innovation to develop. In terms of infrastructure, hospitals should earnestly implement relevant policies. To be specific, hospital should procure practical medical equipment suitable for their technical features to create favorable conditions for the improvement of medical treatment technologies.

Finally, county-level hospitals need to cultivate and attract talents with technical skills. According to the fourth survey conducted by the Ministry of Health, the most severe problem facing county-level hospitals is the lack of talents. The central government plans to train 1.89 million medical personnel for county-level hospitals in three years. By means of policy orientation and economic compensation, the government encourages graduates to work in grassroots clinics in the Central and West regions. This reform has also addressed the issue of certified practitioners practicing at different hospitals in the same period of time. The Ministry of Health has previously approved Guangdong as the pilot area for implementing this policy. Now certified doctors in Guangdong may be allowed to practice in all areas within Guangdong Province. The policy that doctors from large hospitals can visit and practice at county-level hospitals will help alleviate the lack of competent professional at grassroots hospitals. County-level hospitals should be bold to take advantage of whatever staff available and hire experts from large hospitals to practice or guide these staff in medical skills.

5.2.2 Enhance hospital management.

For the medical service industry which has strict requirements for technical skills and a high degree of risk, management is a soft power and a guarantee for healthy and sustainable development of a hospital. In recent years, the "Year of Hospital Management" activities are one of the measures the state has taken to guide hospital management. County-level hospitals are the foundation of health service as well as the weakest link in the medical service industry. Generally speaking, the management system is not well developed and the management cost is too high. The capacity and performance of managers need to be improved and the administrative work needs to be strengthened.

5.2.3 Build organization in a scientific way

The phenomenon of redundant organizational structure and administrative staff in county-level hospitals is not uncommon. Costly management, low efficiency and heavy burden have impeded the development of county-level hospitals. The management of these hospital should identify these problems and take due measures. Administrative organizations should be set up in a scientific way and responsibilities of a job should be well defined. Competition mechanism should also be introduced and performance evaluation be carried out. The aim is to push forward the construction of a responsibility system and make the best use of personnel, fund and materials. Therefore, a well structured and effective management system with rights and responsibilities well specified will be formed.

5.2.4 Perfect rules and regulations.

County-level hospitals lack a scientific standard management system and an evaluation system. Administrators should conduct an in-depth survey on the condition of their own hospitals, learn management experience from well-performed hospitals and set up rules and regulations, especially in terms of medical service quality, infection control, emergency response and economic management. The regulations should be based on reality and be scientific and practical. The evaluation approach should be followed strictly. Administrators should set an example for other staff and enhance their control over the hospital.

5.2.5 Set up a reasonable allocation system.

The issues concerning codes of ethics in the medical service industry is rooted in money. County-level hospitals should take the opportunity of the health care reform and deal with the relationship between income allocation system and professional codes of practice with a new insight. They should update the allocation system inside hospitals by incorporating production elements such as technology, management and code of practice into the allocation system and comprehensive management targets. Then hospitals can increase their revenue; individuals increase their income and the codes of ethics be obeyed. According to the principle of regarding efficiency as the priority, medical staff are encouraged to enhance their skills and serve the patients wholeheartedly. Anyone who does so will get an extra bonus. Thus the value of service can be fully embodied.

5.2.6 Keep up with the times and make consistent renovations.

Establish a modern hospital management system. A modern hospital should be guided by a scientific development view in light of the reality of modern hospital management. It should abide by both the laws of medical science and the s of market economy and keep up with the times by incorporating new management concepts in a consistent way. Hospitals should send their staff to learn advanced ideas from other hospitals and invite experts to train their staff. Thus management performance can be improved and harmonious development of the hospital achieved. The application of management to the medical service industry is a successful example, which should be drawn upon by county–level hospitals.

To sum up, county-level hospitals as the key hospitals supported and built under the latest health care reform ought to take the opportunity to find a solution to their problem and achieve a historic breakthrough in their development.This will help lay a solid foundation for realizing the target that everyone has access to basic health care service in China, addressing the great difficulty and high cost in getting medical services, and establishing a medical service industry with Chinese characteristic.

5.3 Limitations and suggestions for further research

A wider range of investigation should be conducted among the public in the future study for larger samples and detailed statistical analysis should be made on the collected data.

Meanwhile, discussion should be deepened on whether the same methods can be applied to each department in the hospital for formulating market competition strategy and efforts should be taken to specify, complement and improve current market competition strategy for healthcare service. There are various market competition strategies for hospitals and at present there is a lack of consistency in government policies targeting hospital development. The study on how to adjust market competition strategy to the changing environment and policy should be furthered.

Market competition strategy is of particular significance to hospital management. With the deepening reform of healthcare and medical systems, increasing development of healthcare market and increasingly fierce competition, market competition strategy will be widely applied to hospital management.

Expert team will be established to conduct regular review of the implementation of this project. Mid-term and terminal evaluation will be carried out on key construction projects based on schedule progress so as to examine the progress and effects of the project, detect problems timely and provide scientific basis for further adjustment and improvement of the planning.

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Appendices

Survey on Ronggui Hospital's Institutional Conditions

Note: This survey, together with the survey on human resources and the questionnaire on the satisfaction level of patients, will be distributed to departments of relevant organizations for completion. Will the person in charge of the Hospital's project please go through the content of the following tables, and come up with your suggestions as soon as possible if you find it difficult to gather information about some items or any inconsistency hereafter. Once suggestions are made, members of the project team will make adjustment as soon as possible. If the majority of the items in the survey and questionnaires coincide with those in the Hospital's statements, please directly forward a copy of the statements to members of the project team for more efficient coordination and cooperation. The information will be sorted out by the members of the project group.

Thank you for your attention!

Appendix 1 General Information of Ronggui Hospital

Completed by_____ Contact Info._____

ITEM	2001	2006	2007	2008	2009	2010	2011
Gross Income of the Hospital	10050	15908	18389	21557	24751	28203	29901
Operating Income	10050	15908	18389	21557	24751	28203	29901
Including: Income from Pharmaceuticals	4906	6540	7563	9088	10542	11939	11931
Income from Outpatient Service	6521	10043	10844	12761	15359	17223	17891
Income from Emergency Treatment							
Income from Hospitalization	3322	5656	7160	8426	9047	10318	10238
Income from Other Sources	207	188	384	367	344	552	872
Financial Subsidies from Governments at All Levels		20				110	
Including: Financial Subsidy							

from the Provincial Government							
Financial Subsidy from the Municipal Government							
Financial Subsidy from the County-level Government							
Grant from Higher Authorities							
Gross Expenditure	9548	15005	17197	20306	23535	26682	27486
Operating Expense	9548	15005	17197	20306	23535	26682	27486
Including: Medical Expense	4766	8405	9314	10621	12912	14220	14851
Expense for Pharmaceuticals	4745	6550	7860	9371	10445	12128	12030
Expense for Outpatient Service							
Expense for Emergency Treatment							
Expense for Hospitalization							
Other Expense	38	30	23	313	178	232	606
Budget for Scientific Research							
Budget for Teaching							
Budget for Special Fiscal Projects		20				101	
Budget for Human Resources							
Including: Budget for Human Resource Training							
Total Assets （ten thousand yuan）	9216.51	16493.68	18079.46	24462.05	28468.58	44513.07	47009.11
Total Fixed Assets	6940.33	9742.65	10863.35	12696.23	13566.81	14495.47	14957.16
Including: Total Value of Professional Equipment	1398.93	3262.19	4090.93	5751.8	6381.31	7177.94	7440.88
Total Value of the Equipment Worth ten Thousand Yuan and Beyond	6587.77	8907.10	9787.18	11473.46	12207.47	13032.44	13384.06
The Number of Equipment Worth Ten Thousand Yuan and beyond	210	427	532	607	667	718	759

Including: The Number of Equipment Worth Between 500,000 Yuan and 990, 000 Yuan	2	6	7	13	15	17	17
The Number of Equipment Worth 1,000,000 Yuan and beyond	9	12	14	17	18	19	20
Floor Space (m^2)							
Including: Area of the Hospital	42119.1	42119.1	42119.1	42119.1	42119.1	42119.1	42119.1
Area of the Spaces Used for Business Operation	38538.1	38538.1	38538.1	38538.1	38538.1	38538.1	38538.1
Including: Area of Outpatient Clinics							
Area of the Spaces Used for Hospitalization							
Gross Liabilities (ten thousand yuan)	1223.48	2530.7	2925.27	7811.59	11213.26	25129.89	25902.18
Number of Beds	308	398	400	400	400	400	400
Including: Utilization Rate of Beds	70.9	77.7	86.5	93.6	88	99	89
Number of Beds Planned for Use	308	398	400	400	400	400	400
Number of Actually Available Beds	308	398	400	400	400	400	400
Number of Actually Available Beds in ICUs							
Number of Actually Available Beds in EM Observation Rooms							
Turnover of Beds	28.9	34.3	38.3	41.8	38.78	43.33	41.83
Operational Indicators:							
Average Length of Hospital Stay (day)		7.8	8.2	9.3	8.1	8.1	7.86
Average Length of Hospital Stay of the Discharged (day)		7.8	8.2	9.3	8.1	8.1	7.86
Total Number of Hospital Visits							
Including: Number of Outpatient Visits		1117978	1042213	1137487	1364861	1184535	1224299
Number of Emergency Visits		93219	108919	134893	482329	902881	819598

Number of Hospitalizations		13714	12542	13976	15559	17332	16733
Number of Physical Examinations		32303	69796	66485	89494	100947	91846
Number of Emergency Medical Treatment Rescues		237	372	465	482	575	632
Number of Hospitalized Medical Treatment Rescues		640	791	709	630	629	621
Number of Outpatient Surgeries		26574	28503	29507	29871	28683	30500
Number of Inpatient Operations		5314	6412	7394	6974	7553	7067
Average Cost of A Clinical Treatment					83.15	82.51	87.53
Including: Cost of Medicine					38.38	39.14	40.51
Average Cost of An Emergency Treatment							
Average Cost of A Hospitalization					5832.2	5953.17	6118.53
Including: Cost of Medicine							
Cure Rate		60.6	55.8	60.6	57.9	56.9	59.42
Improvement Rate		28.2	32.9	28.6	33.1	35.9	38.23
Case Fatality Rate		0.6	0.6	0.5	0.5	0.4	0.42
Infection Rate of Aseptic Operation		0.1	0	0	0.1	0.07	0.07
Nosocomial Infection Rate		0.2	0.33	0.59	0.83	0.74	0.64
Diagnose Accordance Rate for Discharge and Admission Service		98.8	98.9	99.4	99.5	99.4	99.46
Diagnose Accordance Rate Before and After Operation		98.7	98.9	100	100	99.9	99.88
Diagnose Accordance Rate of Clinical Diagnosis and Pathological Diagnosis						99.72	99.72
Positive Diagnose Rate After Three Days of Hospitalization		96	98.2	97	97.3	97.1	98.55
Rescue Success Rate for Hospitalized Patients in Critical Condition		87.8	88.1	87.3	88.7	90.1	88.89
Frequency of Medical Accidents							
Clinical Departments:							

Number of Level-One Specialized Departments	11	11	11	11	11	11	11
Number of Level-Two Specialized Departments	13	14	14	15	17	17	17
Number of Key Specialized Departments							
Including: Number of Key Specialized Departments at Hospital Level					2	3	3
Number of Key Specialized Departments at Municipal Level and Above							
Operational Guidance:							
Number of Guided Township Health Clinics							
Number of Guided Community Health Service Centers	12	12	12	12	12	12	12
Number of Trained Community and Rural Medical Personnel							
Number of Referrals:							
Number of Referrals out of the Hospital							
Number of Referrals into the Hospital							
Scientific Research:							
Number of Scientific Research Projects							
Annual Budget for Scientific Research	56	100	110	110	110	120	120
Scientific Research Projects							
Including: National Research Projects(Leadership/Assistance/Participation)							
Provincial and Ministerial Research Projects	1	1				1	1
Prefectural and Municipal Research Projects		12	10	12	11	15	14
Others		0	0	0	0	0	0

Number of Published Research Articles	164	170	172	162	164	142	154
Including: Number of Research Articles Published in Domestic Publications	156	157	157	145	147	125	135
Number of Research Articles Published in Domestic Core Publications	8	11	12	14	14	15	17
Number of Research Articles Presented at Domestic Conferences		2	3	3	3	2	2
Number of Research Articles Published in International Publications							
Number of Research Articles Included in SCI	0	0	0	0	0	0	0
Number of Monographs							
Key Disciplines:							
Including: Number of Key Disciplines at Prefectural Level and Above							
Distinctive Key Disciplines at County Level					2	2	2

Appendix 2 Personnel Structure of Ronggui Hospital

Completed by_____ Contact Info._____

ITEM	2001	2006	2007	2008	2009	20010	2011	2015	2020
Total Staff	764	968	1049	1132	1184	1199	1188	1183	1265
Number of Active Staff	652	817	890	963	1010	1020	1007	972	1043
Including: Number of Permanent Staff		346	375	421	450	440	440	772	843
Number of Contract Staff		471	515	542	560	580	567	200	200
Number of the Emeritus and Retirees	112	151	159	169	174	179	181	211	222
Profession:									
Number of Medical Workers		642	707	771	817	825	815	774	837
Number of Doctors	208	234	264	295	302	302	290	266	287
Including: Number of Certified Doctors		188	210	231	247	262	255	236	257
Number of Assistant Certified Doctors		25	27	26	21	21	19	10	10
Number of Intern Doctors/ Feldshers		46	54	64	55	40	35	20	20
Number of Feldshers		25	27	26	21	21	19	10	10
Number of Nurses	246	295	326	350	382	391	389	396	427
Including: Number of Registered Nurses		283	295	310	348	363	373	376	407
Number of Pharmaceutical Personnel	81	79	81	86	85	84	86	63	68
Number of Inspection Personnel	21	23	24	25	29	29	31	26	28
Number of Medical Imaging Personnel	3	3	5	6	8	8	8	10	12
Number of Other Medical Workers (e.g. Healthcare Supervisors)	18	8	7	9	11	11	11	13	15
Number of Other Technical Personnel	75	175	184	192	193	195	192	198	206
Including: Number of Administrative Staff	20	28	31	30	34	36	38	42	45
Number of Ground Skilled Staff	55	128	135	141	136	140	135	135	138
Professional Title:									
Number of Workers in Senior Positions		66	67	72	75	74	78	89	103
Including: Number of Workers with Senior Professional Title	1	5	4	4	6	8	9	13	17
Number of Workers with Deputy Senior Professional Title	19	61	63	68	69	66	69	76	86

Number of Workers with Intermediate Professional Title	107	119	121	140	147	162	178	219	250
Number of Workers with Primary Professional Title	525	467	500	514	555	582	569	664	690
Including: Number of Assistants/Adjuncts	213	260	276	309	339	357	347		
Number of Members/Feldshers	312	207	224	205	216	225	222		
Number of To-be-Hired Workers									
Educational Background:									
Number of Doctors			1	1	2	1		5	7
Number of Masters	6	10	18	24	30	35	35	50	64
Number of Bachelors	65	160	194	252	300	304	317	557	582
Number of Junior College Graduates	122	324	360	392	401	409	405	260	290
Number of Graduates from Technical Secondary Schools and Below	459	323	317	294	277	271	250	100	100
Continuing Education:									
Number of Non-Academically Trained Personnel									
Number of Personnel Sent for Further Training in Hospital at A Higher Level	25	23	25	24	22	22	24	30	40
Number of Workers with Academic Education Background	65	45	50	51	51	32	32	25	25
Including: Number of Workers Who Have Received Full-Time Education	0	0	0	0	0	0	0	0	0
Number of Workers Who Have Received Online Education	65	45	50	51	51	32	32	25	25
Number of Workers Who Have Passed Self-Taught Examinations									
Annual Budget for Training	70	80	90	90	120	120	120	150	170
Number of Persons Trained by the Department									
Including: Number of Doctors									
Number of Masters		7	7	7	8	11	8	10	12
Number of Undergraduate Interns	20	25	25	32	33	35	44	45	55
Number of Visiting Students									

Appendix 3 Top Ten Causes for Diseases Leading to Hospitalization in Ronggui Hospital

Completed by_____ Contact Info._____

Sequence	2001	2006	2011
1		Spontaneous Vertex Delivery	Bronchopneumonia
2		Acute Upper Respiratory Infection	Circular of Umbilical Cord for 1 Circle Delivery
3		Bronchopneumonia	Acute Bronchitis
4		Premature Rupture of Membrane	Cervical Vertebrae Ankylosis
5		Senile Cataract	Chronic Obstructive Pulmonary Disease
6		Acute Exacerbation of COPE Bronchitis	Coronary Heart Disease
7		Acute Bronchitis	Delivery with I-Degree Perineal Laceration
8		Eutocia	Hypertension Ⅲ
9		Fetal Distress in Uterus	Acute Exacerbation of COPE Bronchitis
10		Neonatal Hyperbilirubinemia	Senile Cataract

Appendix 4 Top Ten Causes of Disease in Ronggui Region

Completed by_____ Contact Info._____

SEQUENCE	2001	2006	2011
1		Spontaneous Vertex Delivery	Bronchopneumonia
2		Acute Upper Respiratory Infection	Circular of Umbilical Cord for 1 Circle Delivery
3		Bronchopneumonia	Acute Bronchitis
4		Premature Rupture of Membrane	Cervical Vertebrae Ankylosis
5		Senile Cataract	Chronic Obstructive Pulmonary Disease
6		Acute Exacerbation of COPE Bronchitis	Coronary Heart Disease
7		Acute Bronchitis	Delivery with I-Degree Perineal Laceration
8		Eutocia	Hypertension Ⅲ
9		Fetal Distress in Uterus	Acute Exacerbation of COPE Bronchitis
10		Neonatal Hyperbilirubinemia	Senile Cataract

Appendix 5 Top Ten Causes of Death in Ronggui Region

Completed by_____ Contact Info._____

SEQUENCE	2001	2006	2011
1		Head Trauma	Traumatic Intracerebral Hemorrhage
2		Brain Stem Contusion	Acute Respiratory Failure
3		Traumatic Brain Injury	Head Trauma
4		Respiratory Failure	Septicemia
5		Hypertension Ⅲ	Pulmonary Malignant Tumor
6		Systemic Failure	Multiple Systemic Organ Failure
7		Pulmonary Malignant Tumor	Type Ⅱ Respiratory Failure
8		Upper Gastrointestinal Hemorrhage	Brain Contusion with Subdural Hematoma
9		Acute Exacerbation of COPE Bronchitis	Septic Shock
10		Brain Contusion with Subdural Hematoma	Cardiopulmonary Arrest

Survey Form on Socio-economic Conditions and Demand for Medical Service in Ronggui

Note: Will the person in charge of the Hospital's project please contact the Health Bureau or the Statistical Department to obtain relevant data and fill in these tables.

Appendix 6 Natural and Socioeconomic Conditions in Ronggui (1)

Department name _____ Completed by_____ Contact Info._____

Year	Total Area (square kilometer)	Permanent Resident Population by the End of the Year			Male	Female	Fertility Rate (‰)	Mortality Rate(‰)	Natural Population Growth Rate (‰)	Population Over Sixty Years Old
		Total Population	Registered Population	Non-Registered Population						
2001	80		17.5	17.59			10.35	4.74	9.4	
2002	80		17.9	17.77			9.83	4.52	9.37	
2003	80	31.86	18.18	13.67			9.67	5.18	9.1	
2004	80	37.20	18.82	18.38			10.01	6.15	9.01	
2005	80	40.61	19.11	21.5			10.54	5.98	8.9	19263
2006	80	44.88	19.34	25.54			9.38	4.46	4.92	20110
2007	80	44.81	19.57	25.25			9.15	5.26	3.89	21175
2008	80	44.12	19.73	24.39			9.91	5.75	3.11	22307
2009	80	44.59	19.89	24.69			9.35	4.44	2.28	23592
2010	80	45.43	20.07	25.76			8.87	5.28	3.59	25333
2011	80	46.53	20.23	26.30			10.05	5.24	4.81	28071

Note: In this table, the items "Male" and "Female" refer to the number of registered male population and that of the registered female population by the end of the year.

Appendix 7 Natural and Socioeconomic Conditions in Ronggui (2)

Unit _____ Completed by_____ Contact Info._____

Year	Gross Regional Product (10-thousand-yuan)	Total Industrial Output Value (10-thousand-yuan)	Total Agricultural Output Value (10-thousand-yuan)	Per-capita Gross Regional Product (yuan)	Average Annual Salary of on-post Staff (yuan)	Per- capita Annual Disposable Income of Urban Residents (yuan)	Per-capita Annual Net Income of Rural Residents (yuan)	Local Financial Revenue (ten thousand yuan)	Local Financial Expenditure (10, 000 yuan)
2001	1049339	2631344	26000		14000	15242	5054		
2002	1127154	2854257	26000		14971	15734	5271		
2003	1292005	3649088	19348		16560	17730	5236		
2004	1502000	4410200	13735		18285	19822	5498		
2005	1861457	5301461	12115		21091	20819	6158		
2006	2224513	6661076	9358		24587	22291	8080		
2007	2597880	8380976	8796		28345	24455	8888		
2008	3001899	10302314	9959		32145	26433	9012		
2009	3311966	11261305	9433		35772	28417	9643		
2010	3759057	12083952	7400		38675	30618	9842		
2011					41209	34262	10137		

Appendix 8 Natural and Socioeconomic Conditions in Ronggui (3)

Department name _____ Completed by_____ Contact Info._____

Year	Less than 18 Years Old	18-35 Years Old	35-60 Years Old	Over 60 Years Old
2001				
2006	46577	53147	72500	21175
2007	45420	53689	74464	22307
2008	43234	53866	76588	23592
2009	41651	53798	78131	25333
2010	40734	54016	79239	26740
2011	39589	54382	80239	28071

Appendix 9 Resource Distribution in the Healthcare Market of Ronggui

Department name _____ Completed by_____ Contact Info._____

		2006	2007	2008	2009	2010	2011
Number of Hospitals	Comprehensive Hospitals	1	1	1	1	1	1
	TCM Hospitals	0	0	0	0	0	0
	Specialized Hospitals	0	0	0	0	0	0
	Health Centers	0	0	0	0	0	0
	Private Hospitals	1	1	1	1	1	1
	Outpatient Departments	34	37	41	45	49	49
	Total Number	36	39	43	47	50	51
Number of Community Health Service Institutions		13	13	13	13	13	15
Number of Clinics		25	26	26	26	26	27
Others		0	0	0	0	0	0
Total Number		38	39	39	39	39	42

Appendix 10 Residents' Status of Health and Demand for Medical Service in Ronggui

Department name _____ Completed by_____ Contact Info._____

	2006	2007	2008	2009	2010	2011
Average Life Expectancy						
Infant Mortality Rate (%)		None	None	None	None	0．0543
Maternal Mortality Rate (%)		None	None	None	None	None
Mortality Rate of Children Under Five (%)		None	0．015	0．0164	None	0．0267
Overall Incidence of Categories A and B Infectious Disease (%)						
Two-Week Prevalence Rate (‰)						
Prevalence Rate of Chronic Diseases (‰)						
Two-Weeks Outpatient Rate (‰)						
Average Length of Hospital Stay (day)						
Unfulfilled Hospitalization Rate (%)						
Average Cost of a Clinic Medical Treatment (yuan)		57．32	65．67	66．46	61．67	72．37
Average Cost of an Indirect Medical Treatment (yuan)						
Average Cost of a Direct Hospitalization (yuan)	2987.3	3759．88	4292．41	4793．59	5188．81	5471．65
Average Cost of an Indirect Hospitalization (yuan)						
Average Cost of a Medical Self-Treatment (yuan)						

Note: Please fill in this table with the data collected in the Fourth National Health Interview Survey.

Appendix 11 Status of Residents' Social and Medical Insurance in Ronggui (1)

Department name _____ Completed by_____ Contact Info._____

	2006	2007	2008	2009	2010	2011
Number of Persons Covered by Social Insurance						
Coverage of Social Insurance (%)						
Number of the Emeritus, the Retired and the Resigned						
Total Insurance and Welfare (ten thousand yuan)						
Number of Persons Covered by Endowment Insurance						
Endowment Insurance Fund (10, 000 yuan)						
Collection Rate of Endowment Insurance Fund (%)						
Number of Persons Covered by Unemployment Insurance						
Unemployment Insurance Fund (ten thousand yuan)						
Collection Rate of Unemployment Insurance Fund (%)						

Note: The item "Insurance Welfare" in the table refers to the insurance and welfare of the emeritus and the retired. It includes pensions for retired veterans, retirement payment and pensions for RRSW.

Appendix 12 Status of Residents' Social and Medical Insurance in Ronggui (2)

Department name _____ Completed by_____ Contact Info._____

	2006	2007	2008	2009	2010	2011
Medical Insurance for Urban Workers						
Funding Level (/person • year)						
Coverage (%)						
Number of Applicants						
Fund Utilization Rate (%)						
Medical Insurance for Urban Residents						
Funding Level (/person • year)						
Coverage (%)						
Number of Applicants						
Fund Utilization Rate (%)						
New Rural Cooperative Medical System						
Funding Level (/person • year)						
Coverage (%)						
Number of Applicants						
Fund Utilization Rate (%)						

Appendix 13 Questionnaire on Basic Information & Level of Satisfaction of Patients in Ronggui Hospital

Dear friends:

This survey is carried out in an aim to find out your demand for medical service and level of satisfaction of our hospital. Please spare some time to fill out this form based on your own experience. Anonymity and confidentiality will be ensured. And we also guarantee that the information will be used for the purpose of research only. Your participation and support will be deeply appreciated!

I. Basic Information

1. Gender: (1)Male (2) Female
2. Hometown:County (District), City
3. Marital status: (1) Single(2) Married (3) Divorced
   (4) Widowed(5) Remarried
4. Age: ____years old
5. The distance between your home and our hospital: ( )

(1) Less than 1 kilometer(2) 1-2 kilometers(3) 2-3 kilometers
(4) 3-4 kilometers(5) 4-5 kilometers(6)More than 5 kilometers

6. Your educational background:

(1)Illiterate or semi-literate(2) Primary school(3) Junior high school
(4) Senior high school/ Vocational school(5) Technical secondary school
(6) Junior college (7) College/ University or above

7. Your major profession:

(1) Administrator of Public Institutions
(2) Senior or Mid-level Manager of LME (owner excluded)
(3) Private Entrepreneur
(4) Technician
(5) Officer
(6) Individual Business Owner
(7) Business Service Staff

(8) Non-agricultural Household Worker

(9) Urban Migrant Worker

(10) Rural Migrant Worker

(11) Agricultural Worker (farming, forestry, husbandry and fishing)

(13) Student

(14) Retiree

(15)The Unemployed/Laid-off/Underemployed

8. If you are an urban resident, your current average monthly income is (including government grants): CNY

9. If you are a rural household, your last annual net income (including government grants) is: CNY

10. Your are currently covered by ___ social medical insurance:

(1) None(2)UEBMI(3)Critical Illness Insurance

(4)Public Health Care(5) Labor-protection Medical Care

(6)Cooperative Medical Care(annual premium:_____CNY)

(7) Others

II. Level of Satisfaction (Please mark " √ " where the description matches your experience.)

11. Have you bought any commercial health insurance?

(1) Yes (annual premium:_____CNY)(2) No(3) I don't know

12. Please rate your level of satisfaction with the environment of the Hospital.

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

13. What is your overall satisfaction rating with the medical technology of the Hospital?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

14. How satisfied are you with the overall service quality of the Hospital staff?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

15. What's you level of satisfaction with the length of waiting during each medical procedure ?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

16. Please rate your level of satisfaction with the effect of the treatment you received in the Hospital?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

17. How satisfied are you with the medical fee of the Hospital?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

18. What's you level of satisfaction with the degree of detail and clarity of the doctor's explanations on the diagnosis, examination results and treatment plans?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

19. What's your overall satisfaction rating with the maintenance of privacy concerning your visit to the Hospital?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

20. Overall speaking, how satisfied are you with the Hospital?

(1) Very Dissatisfied(2) Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4) Satisfied (5) Very Satisfied

21. As far as you know, what are the best medical program(s) of Ronggui Hospital:

Thank you for your time!

June, 2012

Appendix 14 Basic Information & Level of Satisfaction of the Medical Staff in Ronggui Hospital

Dear Sir/Madam:

Thank you for your participation and support! It will take you roughly ten minutes to complete this questionnaire. This questionnaire is aimed at finding out level of satisfaction of the medical staff in Ronggui Hospital. The data obtained in this survey will be used for the purpose of research only. Anonymity and confidentiality are guaranteed. Please fill out the form based on facts and mark“ √ ” where the description matches your own situation. Or you can also write the number indicating the respective description above the line. (Will those functional department officers please write down your full name in red.)

I. Basic Information

1. Gender_____ Age_____
2. Department_____
3. Marital status: (1) Single(2) Married (3) Divorced(4) Widowed
4. Monthly income: _____CNY
5. Education background:_____

(1) Graduate school (2) University/College (3) Junior college

(4) Technical secondary school/Polytechnic school (5)Vocational school

(6) Senior high school (7) Junior high school or below

6. Professional title_____

(1) Senior Professional (2) Deputy Senior Professional (3)Intermediate

(4) Adjunct/Assistant (5) Feldsher(6) To be employed

7. Type of employment:

(1) Permanent staff (2) Employee(3) Temporary staff (not officially employed)

8. Length of service:year(s)month(s)
9. Professional certificate(s):

(1) Certified Doctor (2)Certified Assistant Doctor

(3) Certified Nurse (4) Certified Assistant Nurse

(5) Certified Physician

(6) Certified Technician (imaging, sanitary inspection etc.)

(7)General Medical Practitioner

(8)others (e.g. ground skilled staff)

(9) None

10. For doctors only: in the last month, you treated ____outpatients; performed _____ operations(“0” for “No”)
11. From your first working day, you’ve received medical training for times, totaling month(s). (“0” for “No”)
12. From your first working day, which of the following training programs have you received?

(1)Basic knowledge of medicine (2) Profession knowledge

(3) Professional skills (4) New knowledge/skills

(5) Knowledge of management (6) Others (7) No

13. Presently, which of the following training programs do you need most?

(1)Basic knowledge of medicine (2) Profession knowledge

(3) Professional skills (4) New knowledge/skills

(5) Knowledge of management (6) Others (7) No

14. If you have an opportunity to receive training, which of the following ways of training do you prefer?

(1) On-the-job (courses are arranged at weekends) (2) Day-release (courses are concentrated during two or three periods each year)

(3) Full-time (courses are concentrated within one to three years)

(4) Online learning and test

(5) Special training for particular projects

(6) Others

15. Is it necessary for you to obtain a higher academic degree?

(1) Very Necessary (2) Necessary (3) Basically Unnecessary

(4) Unnecessary (5) Unnecessary at all

16. Do you plan to receive academic education within two years?

(1) Yes (2) Possible (3) I don’t know (4) Impossible

17. Do you plan to receive non-academic education within two years?

(1) Yes (2) Possible (3) I don't know (4) Impossible

18. Factors that prevent you from receiving job training or academic education:

(1) Heavy workload (2) Limited seats (3) Insufficient budget

(4) No necessity (5) Family factors (6) Lack of support from the leadership

(7) Others_____ (Please describe in detail.)

19. Purpose(s) of receiving job training or academic education:

(1) Work requirement(2) For promotion (3) For updating knowledge

(4) Others_____ (Please describe in detail.)

(5) N/A (No training or academic education before.)

20. Do you think your department leader attaches importance to the training of cadres?

(1) Very much (2) No (3) It depends.

21. Your favorite teaching method(s):

(1) Case study (2) Scenario simulation (3) Seminar

(4) Remote teaching (5) In-class instruction

22. You prefer training to be arranged____.

(1) At weekends (2) After work (3) On weekdays (4) Others

23. What do you think are the proper method(s) of assessment?

(1) Fulfillment of the compulsory course hours

(2) completion of thesis

(3) Written tests

(4) others

24. Who do you think are appropriate for being trainers of continuous education?

(1) Government officers (2) Teachers or researchers

(3) Experienced professionals (4) Others

25. What do you think is the proper frequency of training?

(1) Three to four times a year (2) Twice a year (3) Once a year

(4) Once every two years (5) Others （）

26. Which group of professional staff do you think need training most?

(1) Clinical doctors (2) Nurses (3) Clinical technicians

(4) Inspectors (5) Prevention/ Sanitary supervisors

(6) Administrators/ Managers (7) Ground skilled staff

(8) others

II. Level of Satisfaction (Please mark " √ " where the description matches your own situation.)

27. Please rate your level of satisfaction with your wage and bonus.

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

28. What's your overall satisfaction rating with the holiday system of the Hospital?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

29. How satisfied are you with the working environment of the Hospital?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

30. Please rate your level of satisfaction with the training or education opportunity provided by the Hospital?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

31. What's your satisfaction rating with your job prospect?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

32. How satisfied are you with the interpersonal relationship among the colleagues?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

33. Please rate your level of satisfaction with the performance appraisal system of the Hospital?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

34. How satisfied are you with the cultural development of the Hospital?

(1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied

(4)Satisfied(5)Very Satisfied

35. What's your overall satisfaction rating with the overall administration of the Hospital?
    (1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied
    (4)Satisfied(5)Very Satisfied
36. What's your overall satisfaction rating with the overall satisfaction of the Hospital?
    (1)Very Dissatisfied(2)Dissatisfied(3) Neither Satisfied Nor Dissatisfied
    (4)Satisfied(5)Very Satisfied

37. What aspects do you think you need to be improve in the future? What do you think the Hospital should do to help you?

38. What's your opinion about the human resource development of the Department and that of the Hospital? What do you think are the orientation and objectives for human resource development of the department and that of the Hospital at large?

39. Up to now, Ronggui Hospital has made remarkable achievements. What do you think are the advantages and disadvantages of Ronggui Hospital at present?

40. What opportunities do you think Ronggui Hospital should seize in order to sustain its sound development? And what are the challenges facing Ronggui Hospital?

Thank you for your time!
June 2012

Appendix 15 Analysis on Patients' Level of Satisfaction with Ronggui Hospital

	187	Clinical Environment			Medical technology			Service Attitude			Length of Waiting			Treatment Effect			Cost		
		①	②	③	①	②	③	①	②	③	①	②	③	①	②	③	①	②	③
	0	1	0.53	0.53	—	—	—	1	0.53	0.53	—	—	—	2	1.07	1.07	1	0.53	0.53
A	1	2	1.07	1.60	2	1.07	1.07	3	1.60	2.14	4	2.14	2.14	2	1.07	1.07	3	1.60	2.14
B	2	10	5.35	6.95	6	3.21	4.28	2	1.07	3.21	14	7.49	9.63	3	1.60	1.60	15	8.02	10.16
C	3	58	31.02	37.97	43	22.99	27.27	36	19.25	22.46	57	30.48	40.11	40	21.39	21.39	74	39.57	49.73
D	4	81	43.32	81.28	90	48.13	75.40	92	49.20	71.66	82	43.85	83.96	103	55.08	55.08	74	39.57	89.30
E	5	35	18.72	100	46	24.60	100	53	28.34	100	30	16.04	100	37	19.79	19.79	20	10.70	100
		Degree of detail and Clarity			Maintenance of Privacy			Overall SatisfactionLevel											
		①	②	③	①	②	③	①	②	③									
	0	—	—	—	—	—	—	—	—	—									
A	1	3	1.60	1.60	2	1.07	1.07	2	1.07	1.07									
B	2	3	1.60	3.21	1	0.53	1.60	3	1.60	2.67									
C	3	40	21.39	24.60	33	17.65	19.25	44	23.53	26.20									
D	4	93	49.73	74.33	119	63.64	82.89	101	54.01	80.21									
E	5	48	25.67	100	32	17.11	100	37	19.79	100									

Note: A=Very dissatisfied; B=Dissatisfied; C=Neither satisfied not dissatisfied; D=Satisfied; E=Very satisfied.

① =Number of people; ②=Percentage; ③=Cumulative percentage

Appendix 16 Analysis on the Hospital Staff’ s Satisfaction

		Income & Bonus			Holiday System			Work Environment			Training opportunities			Future		
	194	①	②	③	①	②	③	①	②	③	①	②	③	①	②	③
	0							1	0.52	0.52						
A	1	89	45.88	45.88	45	23.20	23.20	35	18.04	18.56	18	9.28	9.28	23	11.86	11.86
B	2	58	29.90	75.77	50	25.77	48.97	68	35.05	53.61	46	23.71	32.99	43	22.16	34.02
C	3	35	18.04	93.81	81	41.75	90.72	73	37.63	91.24	94	48.45	81.44	98	50.52	84.54
D	4	9	**4.64**	98.45	17	**8.76**	99.48	16	**8.25**	99.48	33	**17.01**	98.45	29	**14.95**	99.48
E	5	3	**1.55**	100	1	**0.52**	100	1	**0.52**	100	3	**1.55**	100	1	**0.52**	100
		Interpersonal Relationship			Appraisal System			Cultural Development			Administration			Overall Satisfaction Level		
		①	②	③	①	②	③	①	②	③	①	②	③	①	②	③
	0	–	–	–	1	0.52	0.52	–	–	–	–	–	–	–	–	–
A	1	3	1.55	1.55	41	21.13	21.65	23	11.86	11.86	40	20.62	20.62	35	18.04	18.04
B	2	11	5.67	7.22	71	36.60	58.25	37	19.07	30.93	40	20.62	41.24	47	24.23	42.27
C	3	79	40.72	47.94	63	32.47	90.72	100	51.55	82.47	84	43.30	84.54	85	43.81	86.08
D	4	89	**45.88**	93.81	17	**8.76**	99.48	32	**16.49**	98.97	28	**14.43**	98.97	26	**13.40**	99.48
E	5	12	**6.19**	100	1	**0.52**	100	2	**1.03**	100	2	**1.03**	100	1	**0.52**	100

Note: A=Very dissatisfied; B=Dissatisfied; C=Neither satisfied not dissatisfied; D=Satisfied; E=Very satisfied.
①=Number of people; ②=Percentage; ③=Cumulative percentage

Appendix 17 Schedule for Development Research of Ronggui Hospital

2012.05.16

Afternoon: Meet with the Project leader of the Hospital; describe and discuss about the questionnaires and survey forms; make the necessary modifications;determine the form of completion and time of collection.

2012.05.17

Morning:Project Initiation

The 1st Interview: Interviewee: President of Ronggui Hospital

Interviewer: The Research Group of Sun Yat-sen University

The 2nd Interview: Interviewee: Vice-president of Ronggui Hospital

Interviewer: The Research Group of Sun Yat-sen University

Afternoon:

The 3rd Interview: Interviewees: Mid-level management leaders of Ronggui Hospital

Interviewer: The Research Group of Sun Yat-sen University

The 4th Interview: Interviewees: Experts and representatives of staff of Ronggui Hospital

Interviewer: The Research Group of Sun Yat-sen University 2012.05.18

Morning:

The 5th Interview: Interviewee: Vice-district mayor of Shunde District

Interviewer: The Research Group of Sun Yat-sen University

The 6th Interview: Interviewees: Director and deputy director of the Health Bureau of Shunde District.

Interviewer: The Research Group of Sun Yat-sen University Afternoon (flexible)

The 7th Interview: Interviewees: Director and deputy director of the Health Bureau, of Foshan District

Interviewer: The Research Group of Sun Yat-sen University

2012.05.19

Morning: Site observation in accordance with the National Level-Three General Hospital Accreditation Standards and the Level-Three General Hospital Accreditation Standards& Specifications (Guangdong), including requirement on specific hardware facilities, clinical environment, as well as system and culture of the Hospital.

Members of the Research Group:

1. Chen Shaoxian, Male, Professor, Sun Yat-sen University,
2. Kuang Li, Female, Associate Professor, Sun Yat-sen University,
3. Peng Xiaoming, Female, Instructor & Doctor, Sun Yat-sen University,
4. Wang Lian, Female, Postgraduate, Sun Yat-sen University
5. Zhao Yinping, Female, Postgraduate, Sun Yat-sen University
6. Huang Biliu, Male, President of Ronggui Hospital

Appendix 18 Outline of Qualitative Research Interview

Interviewees & Form of Interview:

Session	Form	
	In-depth Interview	**Focus Group Interview**
First	President of Ronggui Hospital	All the vice presidents of Ronggui Hospital
Second	Director or deputy director of the Health Department of Ronggui Hospital	Mid-level leaders of the Hospital (deans of departments and representatives of the nursing department)
Third	Director or deputy director of the Health Bureau of Shunde District	Experts and representatives of the staff of the Hospital
Fourth	Director or deputy director of the Health Bureau of Shunde District	
Fifth	Liao Xinbo, Deputy Director General of the Department of Health, Guangdong Province	

Questions:

1. How do you position Ronggui Hospital in Foshan considering its medical service quality, scale, development trends in the following five years, market share, service coverage, etc.?
2. Compared with other medical institutions of the same level or within the same region, what do you think are the advantages and distinctive characteristics of Ronggui Hospital? And what are its disadvantages? (For example, academic strength, teamwork spirit, service capacity, service level, technical support, core competency, culture development, motivation, human resource development strategy, hospital management and cost)
3. What do you think is the driving force (core value) of the Hospital?
4. Where do the majority of patients come from? And what characteristics do you think these patients have?
5. What factors do you think have stood in the way of the development of Ronggui Hospital?
6. Please kindly put forward your vision and suggestions for the “Twelfth Five-Year Plan” for Ronggui Hospital (including its scale, service capability and service level, discipline construction and research, development of human resources for health, etc.?

Appendix 19 Conclusions of Interviews

The author has carried out ten interviews from 2 p.m. on May 16th to 5:30 p.m. on May 18th.Interviewees are the mid-level leaders of Ronggui Hospital, including directors of clinical departments, heads of medical laboratories, heads of functional departments and representatives of head nurses.

The author hereby give the following conclusions of the interview results:

1.Ronggui Hospital boasts a long history. Built in 1990, it was then the largest township hospital in China. Back then, Ronggui Hospital was positioned as a township hospital. It faces Daliang Street on the north, Xingtan Town on the west, Zhongshan City (including seven towns, such as Dongfeng, Xiaolan, Nantou and Huangpu) on the south, and Dagang Town of Panyu District on the east. Shunde District has a population of about 2,380,000 (according to the 2010 Census). There are 26 neighborhood committees in Ronggui Street, which accommodates470,000 permanent residents, of whom 210,000 are registered residents.

The majority of patients of Ronggui Hospital are migrant workers. They account for 70% to 80% of all patients. Only the remaining 20% to 30% are local residents. Most of the migrant workers are at their own expense, whereas local residents pay by social insurance. The Hospital specializes in the diagnosis and treatment of some common or frequently-occurring diseases, such as fever and cold.

2. Major problems reflected during interviews:

(1) Built in 1990, the hospital now has a history of more than twenty years. Now, it is still confronted with shabby rooms, poor working conditions and poor treatment environment.Nevertheless, surrounding hospitals have all built new sites, and the number of hospitals of a considerable scale is also increasing. All these changes have exerted a huge impact on the development of Ronggui Hospital;

(2) The hospital is in lack of a scientific performance assessment mechanism. Quantitative methods are adopted to appraise everyone whoever they are. To be specific,the volume of business, including indicators such as per capita outpatient visits, per capita bed visits and surgical cases, has been used for performance appraisal for more than ten years, regardless

of different positions and posts. Now the fact is that employees are paid a fixed amount of salary no matter they perform their duties well or not. Sometimes they even have to suffer a deduction of payment. As a result, staff of the Hospital have little enthusiasm and initiative for work.

(3) Because of low salary and poor job prospect, staff only see a dead end if they continue working in the Hospital. As a result, they lack the sense of belonging, cohesion and teamwork spirit. Brain drain has become a very serious problem. Moreover, due to factors such as low salary, backward medical equipment and poor working environment, it is very difficult to introduce/recruit competent medical professionals.

(4) Most of the interviewees mentioned the outdated medical equipment, most of which have been used for more than a decade.For example, the CT machine is the most outdated. It is unable to perform many examinations and assist surgeries. Despite this, the hospital has not updated its equipment in recent years;

(5) The Hospital is still in need of a scientific management model and philosophy. Many standards of the existing quality authentication and management system remain a mere scrap of paper. Hospital managers do not have a clear vision for the future of the Hospital; the functional departments have little control over the clinical departments; and little communication has been carried out between leaders and employees. As a result, employees do not have a way to voice their demands;

(6) The Hospital receives little government investment. Since 2000, the government has made no investment to subsidize the salary of the staff. Besides, now the government even requires the Hospital to have an annual balance of twelve million yuan to support the development of the new hospital.Special subsidies are provided only when there are emergencies such as the outbreak of SARS and the Sanlu Milk Powder Incident. The government has made some investment only in the construction of the new hospital and the purchase of some medical facilities.

(7) The government exercises strict supervision over the Hospital, especially in terms of social insurance. According to regulations of the social insurance, the payment on each prescription under the cooperative medical system shall not exceed a certain amount, otherwise deduction of salary will be suffered by doctors who produce the prescriptions.

Because of this, many patients are reluctant to have more medicine prescribed at a time. In particular, patients with hypertension or diabetes have to suffer frequent long waiting for treatment in hospital.

Note: The above-mentioned six aspects are the most frequently mentioned and the most serious problems according to interviewees. Other problems that are seldom mentioned are not listed out one by one.