

Fundamental Textbook for Overseas Students of  
Huazhong University of Science & Technology

# Essential Theory of Health Management

**Chief Editor** Fang Pengqian

**Deputy Editor** Zhang Hongxing

Xiang Fei



WUHAN UNIVERSITY PRESS

Fundamental Textbook for Overseas Students of  
Huazhong University of Science & Technology

# Essential Theory of Health Management

Chief Editor Fang Pengqian  
Deputy Editor Zhang Hongxing  
Xiang Fei



WUHAN UNIVERSITY PRESS

## 图书在版编目(CIP)数据

健康事业管理概论 = Essential Theory of Health Management/方鹏骞主编.  
—武汉:武汉大学出版社,2016.11  
ISBN 978-7-307-18719-1

I. 健… II. 方… III. 卫生管理学—医学院校—教材 IV. R19

中国版本图书馆 CIP 数据核字(2016)第 235264 号

责任编辑:胡 艳      责任校对:汪欣怡      版式设计:韩闻锦

---

出版发行:武汉大学出版社 (430072 武昌 珞珈山)

(电子邮件:cbs22@whu.edu.cn 网址:www.wdp.com.cn)

印刷:武汉中科兴业印务有限公司

开本:787×1092 1/16      印张:9.25      字数:216千字      插页:1

版次:2016年11月第1版      2016年11月第1次印刷

ISBN 978-7-307-18719-1      定价:28.00元

---

版权所有,不得翻印;凡购买我社的图书,如有质量问题,请与当地图书销售部门联系调换。

## Editorial Committee

### Chief Editor

**Fang Pengqian** Huazhong University of Science and Technology

### Deputy Editor

**Zhang Hongxing** Hubei University of Traditional Chinese Medicine

**Xiang Fei** Huazhong University of Science and Technology

### Members (In the order of the first letter of the English name)

**Chen Jing** Huazhong University of Science and Technology

**Fang Pengqian** Huazhong University of Science and Technology

**Fang Zi** Huazhong University of Science and Technology

**Hu Yinluan** Huazhong University of Science and Technology

**Ma Jingdong** Huazhong University of Science and Technology

**Min Rui** Huazhong University of Science and Technology

**Tang Changmin** Hubei University of Traditional Chinese Medicine

Huazhong University of Science and Technology

**Wang He** Huazhong University of Science and Technology

**Xiang Fei** Huazhong University of Science and Technology

**Xiang Li** Huazhong University of Science and Technology

**Xiong Juyang** Huazhong University of Science and Technology

**Xu Juan** Huazhong University of Science and Technology

**Zhang Hongxing** Hubei University of Traditional Chinese Medicine

**Zhang Xiaoyan** Hubei University

## Preface

As the deepening of the Reform and Opening-up in China and the improvement of China's international status, the importance of the globalisation of education has reached a new level. *National Medium and Long-term Educational Reform and Development Program (2010—2020)* points out that we must reinforce communication and cooperation with foreign counterparty so as to improve the globalisation process of our education. In order to enhance our nation's international education system, it is critical that we build a foreign students service system which matches our international status and education demand. To achieve this, the Ministry of Education published the *Schedule for Studying in China* and aimed to become the biggest studying destination in Asia.

Huazhong University of Science & Technology is under the direct administration of the Ministry of Education, and is one of the top universities in China. It is imminent for our university to build an education model that cultivates foreign students that reflect our standard of education. To achieve this, we need the curricular system and textbooks that are of international standards. At present, our university has approximately 3600 foreign students who come from more than 130 countries around the world. Most of them attend medical majors and, therefore, the quality of the curricular system, textbooks and reference materials for medical foreign students will largely decide the level of international education of our university. Clinical medicine and public health deal with individual and group health respectively, while health management aims to improve health development for the whole society. This is why, based on teaching experience of many years, Professor Fang Pengqian from Huazhong University of Science & Technology and his team design this textbook specifically for foreign medical students in our university.

Health management focuses on the development of medical and health care industry and has a unique knowledge structure and specific methodologies. This interdisciplinary subject examines the problems in the development of health care industry from various perspectives and utilises knowledge from Management, Politics, Economics, Sociology and Ethics. Usually, what confuse medical students are not only clinical related problems, but also issues related to medical insurance, health system, hospital management. Therefore, this book is crucial for medical students as it helps them develop problem-solving abilities in this field.

*Essential Theory of Health Management* is a core course for medical foreign students. On the one hand, it is a crucial textbook for foreign students majored in Clinical Medicine, Preventive Medicine, Nursing Science and so on, while it also is an important reference book for foreign students of other majors. On the other hand, this book is suitable for Chinese students who are

interested in interpreting health management problems from an international perspective.

This is the first English textbook on health management that is designed for foreign medical students in our university. This book illustrates both theoretical and practical issues about health management organisations, public health management, community health management, costs of clinical treatments, hospital information system and hospital resource planning, and includes case studies of national and international affairs.

Professor Fang is well-known for his contributions to the health management field and has focused his research on medical and health industry reform, hospital management, global health issues. Meanwhile, Professor Fang is well-respected for his rich teaching experience on the medical and health industry reform in China. Professor Fang always actively seeks feedback from foreign students and pays great attention to their needs and interests. Thus, I firmly believe that this book is a must-have for those who want to learn about health management and will contribute tremendously to our university's education system for foreign medical students.



# Contents

<b>Chapter 1 Introduction</b> .....	1
1. 1 Summary of Management .....	1
1. 2 Health Services .....	5
1. 3 Health Management .....	10
<b>Chapter 2 The Basic Connotation of Health Management</b> .....	13
2. 1 Health Development Strategy .....	13
2. 2 Health Management System .....	14
2. 3 Overview of Health Resources Planning .....	15
2. 4 Summary of Health Human Resource Management .....	17
2. 5 Medical Services Management Overview .....	19
2. 6 Public Health Service Management Overview .....	22
2. 7 Community Health Service Management .....	25
2. 8 The Theory of Health Systems Performance Assessment .....	26
<b>Chapter 3 Organization and Management of Primary Health Care</b> .....	31
3. 1 The Concept of Primary Health Care .....	31
3. 2 The Subject of Primary Health Care .....	33
3. 3 Management for Primary Health Care .....	36
<b>Chapter 4 Introduction to Public Health Administration</b> .....	43
4. 1 Overview of Public Health .....	44
4. 2 Organization and Financing of Public Health .....	53
4. 3 Public Health System Performance Evaluation .....	59
4. 4 Meta-leadership in Public Health .....	64
<b>Chapter 5 Community Health Care</b> .....	70
5. 1 Introduction .....	70
5. 2 Community Health Assessment (CHA) .....	74
5. 3 Health Care System and CHC Delivery in Mainland China .....	78

<b>Chapter 6 Burden of Disease ( BOD )</b> .....	80
6. 1 Background and Professional Terms of BOD .....	80
6. 2 The Global Burden of Disease .....	88
6. 3 Classification and Calculation of Burden of Disease .....	93
<b>Chapter 7 Health Financing and Universal Health Coverage</b> .....	96
7. 1 Basic Concept of Health Care Financing .....	96
7. 2 Universal Health Coverage .....	98
7. 3 Social Health Insurance .....	103
7. 4 Health Care Financing and Provider Payment System .....	105
7. 5 Case Study .....	108
<b>Chapter 8 Hospital Information System</b> .....	110
8. 1 Introduction .....	110
8. 2 Hospital Management Information System .....	117
8. 3 Clinical Information System .....	124
8. 4 Electronic Medical Record .....	132
<b>References</b> .....	141

# Chapter 1 Introduction

## 1.1 Summary of Management

### 1.1.1 Concept of Management

Many experts and scholars made different interpretations of management from different perspectives. Some representative views are as follows:

Frederick Winslow Taylor, the founder of scientific management theory, thought management to know exactly what you want the workers to do, and then make them use the best and the most economical way to complete it. This shows that management a clear goal, is to teach employees the methods of work, in order to achieve the goal in the best way.

Henri Fayol, the founder of the modern management theory, raised one of the first comprehensive statements of a general theory of management. He proposed that there were five primary functions of management and fourteen principles of management.

Harold Koontz, a professor of California University in Los Angeles, said that management is to design and maintain a good environment which makes people in the group to achieve the goal of high efficiency.

Simon Herbert believed that management is decision-making. Although this definition fails to reflect the content of management, it highlights the dominant position of decision-making in management, and emphasizes the decision-making is throughout the process of management, which indicates the inner relationship between the decision and management.

American management scientist Stephen P. Robbins said that management refers to the process of being more effective with others, or through other people's activities.

Some scholars in our country also give some definitions, such as Zhang Shangren said that management is the technology, science and activities which the organization and people control itself to achieve goals.

The so-called management is the process of integrating the resources of the organization effectively through the planning, organizing, leading, controlling and other activities in order to achieve the goal in the specific environment. It contains the following four meanings:

(1) As a purposeful activity of an organization, management must aim at the organization's goal. It is a conscious and purposeful process.

(2) Management should be reflected and completed through the planning, organizing, leading, controlling and other activities, but they are just part of the means or methods to help effectively integrate resources.

(3) The emphasis of management is on the effective integration of organizational resources (including human, finance, material, information, technology, time, reputation, etc.).

(4) Management activities are performed in a certain environment. Environment has created certain conditions and opportunities, but also poses certain constraints and threats. Effective management must take into account the specific conditions from internal and external organization.

### 1.1.2 Functions of Management

In order to accomplish the management task, the role of the management functions needs to be played. The most commonly cited functions of management are planning, organizing, leading, and controlling, despite the fact that some identify additional functions.

(1) Planning is the function of management that involves setting objectives and determining a course of action for achieving these goals. Planning determines the direction of the whole organization, and is the primary function of management. Management activities in the logical order always start with planning. Organizing, leading and controlling must follow the planning. Therefore, in a broad sense, they belong to the implementation of planning. Generally speaking, the program and the contents of planning mainly include the following three aspects:

① Environmental scanning: Planners must be aware of the critical contingencies that their organization faces, in terms of economic conditions, their competitors and their customers. Planners need to forecast future conditions. These forecasts are the basis for planning.

② Decision making: Based on external environment and internal conditions, according to the opportunities and threats that may be offered in the environmental change, and the resources' advantages and weaknesses of the organization, it must choose the direction, goal and path of future actions. Decision making is especially important in the planning stage, despite the fact that it is throughout the whole process of management. It determines the quality of the plan, and determines the level of the entire management.

③ Developing action plans: Planners must establish objectives, the statements of what needs to be achieved and when. Planners must identify alternative courses of action for achieving objectives. After evaluating the various alternatives, planners must make decisions about the best courses of action for achieving objectives. They must formulate the necessary steps and ensure effective implementation of plans. Finally, planners must constantly evaluate the performance of their plans and take corrective measures when it's necessary.

(2) Organizing is the function of management that involves developing an organizational structure and allocates the human resources to guarantee the accomplishment of objectives. The structure of the organization is the framework within which the effort is coordinated. The

structure is usually represented by an organization chart, which provides a graphic representation of the chain of command within an organization. The specific procedures and contents of the organizing include three parts: organizational design, staffing, and organizational change.

① Organization design: According to the plan, it will set up the positions. According to a certain standard, it will combine these positions, and form into different departments. And according to the organizational and environmental characteristics, it will determine the relationship among the different departments.

② Staffing: According to the requirements of each job activity as well as the quality and skill characteristics of organization members, it will select the appropriate placement in the relevant post, make appropriate work that will be borne by the right people.

③ Organizational change: According to the changes in the organization and its environment, the adjustment of the organization and structure is necessary. It can eliminate the aging condition of the organization, overcome organizational inertia, optimize the allocation of resources, and realize the dynamic balance between human and business in the organization. It can also assure the organization's vitality, and to achieve organizational goals effectively.

(3) Leading is the third function of management. Working under this function helps the management control and supervise the staff. It also gives them the opportunity to render assistance to the employees by guiding them to the right direction, to achieve the company's goals and also accomplish their personal or career goals, which can be powered by motivation, communication, department dynamics, and department leadership.

Leading attempts to motivate and lead the employees toward the planned objectives. It aims to delegate tasks to subordinates, the right approach to it can be helpful to increasing the productivity of the entire organization. Leading is an anthropological function of management, and that deals with people on a personal basis. Managers who have the responsibility to lead the staff have to be sensitive to behavior patterns and have the ability to read body language so as to make more informed decisions regarding their workers.

(4) Controlling, the last step of the management functions, which includes the establishing performance standards, which balancing the company's objectives. It also involves evaluation and reporting of actual job performance. When these points are studied by the management, it is necessary in order to compare all these things. This study or comparison leads to further corrective and preventive actions. The controlling function aims to confirm that if the tasks being allotted are performed in time and in accordance with the standards set by the quality department.

Controlling happens after the planning process has been put in place and the tasks assigned. It aims to see if the results are consistent with the objectives set forth in the original plan. Standards must be adjusted according to the available resources and accounting for external factors which may affect performance. The controlling process, in comparison with the other three, is a continuous process. All levels of management take part in this function. Control is

also dynamic in nature as the management can anticipate future problems, adopt necessary prophylactic measures, and make policy changes in time.

The management functions of planning, organizing, leading, and controlling are widely regarded as the best means of describing the manager's job as well as the best way to classify accumulated knowledge about the study of management. Despite the fact that there have been tremendous changes in the environment faced by managers and the tools used by managers to perform their roles, managers still perform these essential functions.

### 1.1.3 Characteristics of Management

Management is a dynamic and creative activity, which can effectively integrate the resources of the organization in order to achieve the goal of the organization. Such activity is different from cultural activity, scientific activity and educational activity.

#### 1.1.3.1 Is Management a Social Phenomenon or Cultural Phenomenon

As long as there is a human society, there is management. As long as it is common for many people (i.e., to a common goal), it is needed in order to achieve the benefits of collaboration by making plans and setting goals and other activities. Therefore, management is a social phenomenon or a cultural phenomenon. Two basic conditions for the existence of management are that there must be two people at least in the collective activity, and there must be a consistent goal.

#### 1.1.3.2 The Carrier of Management Is Organization

Many of the activities of management are carried out in a certain organization. There is no management without an organization. Therefore, the carrier of management is the organization.

#### 1.1.3.3 The Core of Management Is to Deal with All Kinds of Relationships

Management does not constitute an individual activity; it is implemented in a certain organization. Everything in the organization is communicated and handled by the person, so the manager is indeed in charge of the employees. Management activities need to deal with people from the beginning to the end. Therefore, the core of management is tantamount to dealing with all kinds of relationships.

#### 1.1.3.4 Scientificalness and Artistry of Management

Management activities should follow the requirements of the scientific management in the process of objective laws, and embody the art of contingency requirements. This is the scientificalness and artistry of management.

##### 1. Scientificalness of Management

As an active process, there are a series of basic objective laws in management. After

numerous failures and successes, people summed up a series of management theories and general methods by collecting, summarizing and detecting the data in the practice, putting forward the hypothesis, verifying hypothesis. People use these theories and methods to guide their management practices, and utilize the results of management activities to measure the management of the theories and methods that used in the process whether it is effective or correct. Management of scientific theories and methods in practice has been verified and enriched. Management is a science, which reflects the management theories and methods of the empirical law, and has a set of scientific methods to analyze and solve problems.

### 2. Artistry of Management

Management must be built on the environment and change, pay attention to the way, and avoid mechanical management. Management is an art, any manager must put forward the corresponding countermeasures according to current situation. Sometimes the failure happens, mainly because of the regardless of the actual situation and the neglect of the artistry of management.

### 3. The Relationship Between the Scientificity and Artistry of Management

The scientificity and artistry of management are interdependent and complementary to each other. The systematic nature of management reveals the rules of management activities, and reflects the common characteristics of management; the artistry of management is to reveal the special rules of management, and reflect the personality of management. The generic characters exist in the personality, that is, the scientific nature of management is included in different management practices. Each management activity is not only the usual requirements of management, but also their own characteristics.

The scientificity and artistry of management interact with each other. The former lays the foundation for the latter, which enables the manager to grasp the essence of management, and thus has a steady stream of creativity; the latter is to make the management complete from theory to practice, from abstract to concrete, and be flexible in all kinds of situations.

Understanding management is the unity of science and art, which enables the manager to realize the organic combination of scientific management and the management of art. It is advantageous for the manager to realize the management effectively.

## 1.2 Health Services

### 1.2.1 The Conception of Social System and Health System

#### 1.2.1.1 Social System

In the book *General System Theory: Foundations, Development and Applications*, American biologist L.V. Bertalanffy, who is the founder of system theory pointed out that the

system is a number of elements in accordance with the specific structure, each links with a specific function of the whole body. The system structure consists of the relationship among the elements, structure determines the system function. According to the hierarchical division, the social system in the world can be divided into different regions and countries, for the nation, it is divided into different industries; for the industry, it is subdivided into different enterprises, units, institutions or families; for the enterprises and units, it is divided into different departments; it is eventually settled into the natural person (the basic elements of social systems). Social systems are generally divided into other subsystems (such as education, health, science, technology, etc.) in the economic, political, cultural, ecological and social systems.

### 1.2.1.2 Health System

Health system includes the organizations, institutions and resources aimed at developing health activity for the purpose of promoting, recovering and maintaining health. The key words of the definition are “health activity”, whether it is private health care or public health service, or the health promotion activity with several departments, as long as the intention is to promote, recover or maintain health, then it can be considered as health activity, which means, the judgment standard of health activity is that whether the original starting point aimed at promoting, recovering or maintaining health. For example, improving the nutritional status of residents, improving the level of population education and so on, these are conducive to the improvement of health, but if the original starting point of the improvement of nutritional status and education level is not from a point of health view, but from the others, it can not be called health activity.

Health system is a complex system, any individuals, groups, organizations and related resources that take promoting, recovering and maintaining of health as the main goal are within the category. Such as preventive health care and medical service providers, funding agencies, producers of medicine, reagents and medical equipments, doctors and nurses, managers and planners of health service, etc.. Thus, health system has the characteristics of multi-participation. All aspects of this system are interrelated and interacted with each other, and they need to work together to achieve the ultimate goal of the system.

From the viewpoint of system theory, first of all, the health system is an organic circle, the function of the health system is greater than the sum function of each subsystem. Secondly, the subsystems of the health system are not isolated. At the same time, the elements and subsystems are interrelated, which constitute the indivisible unity of the health system.

### 1.2.2 The Function and Influence of Social System on Health System

From the view of the social system, as a subsystem of the social system, the health system can realize the best function of the social system only by the coordinated and balanced

development of other subsystems of society. The specific effects and functions of other subsystems on the health system are as follows:

### **1.2.2.1 Economic System**

The level and strategy of national economic development determine the amount of the investment quota and available resources in the process of health development. The higher the cost of investing in health, the more resources to improve the providing of health services .

### **1.2.2.2 Political System**

In a country, the internal political environment and the ruling party's intention, affect the direction and goal of the health development, as well as the height and position of health problems in social development. In the early stages of development, the ruling party is more inclined to "take economic construction as the center", neglect the importance of health in the national economy for a short period. However, in the developed countries, especially the welfare oriented countries, such as the United Kingdom, Sweden, and so on, usually place the health in the important position of social development.

### **1.2.2.3 Cultural System**

Cultural environment is related to the residents' values of health or ethics in a country or region. The effects of cultural environment on the health are mainly shown in the following three aspects: the overall value of the society, the medical personnel's practice concepts, and the health expectations of people. In addition, from the perspective of the demand and supply of economics, the growing demands of health are inexhaustible power to promote the development of health service.

### **1.2.2.4 Ecosystem**

Ecosystem provides material support for the development of health system. Health system is based on the ecological system, the building materials, the raw medicine materials of health organization, and even the air, water resources which medical personnel rely on to survive are provided by ecosystem. In addition, the changes of the ecosystem affect the risk of disease. If the ecosystem is polluted and destroyed, it will lead to disease.

### **1.2.2.5 Other Subsystems**

The other subsystems in the social system mainly affect the structure and quality of the population, the level of science and technology and so on. The population quality and structure determine the characteristics of the disease spectrum, and then affect the development of health.

### 1.2.3 Functions of Health System

The functional frame of health system includes the following four aspects:

- (1) providing health services;
- (2) providing medical support, including financing to establish a pool of funds, the allocation of funds for the purchase of services;
- (3) raising resources, including human resources, material resources and financial resources;
- (4) management, the health system acts as a housekeeper, manage funds, allocate power, and respond to the expectations of people.

Figure 1-1 shows the relations between functions and objectives of health system.

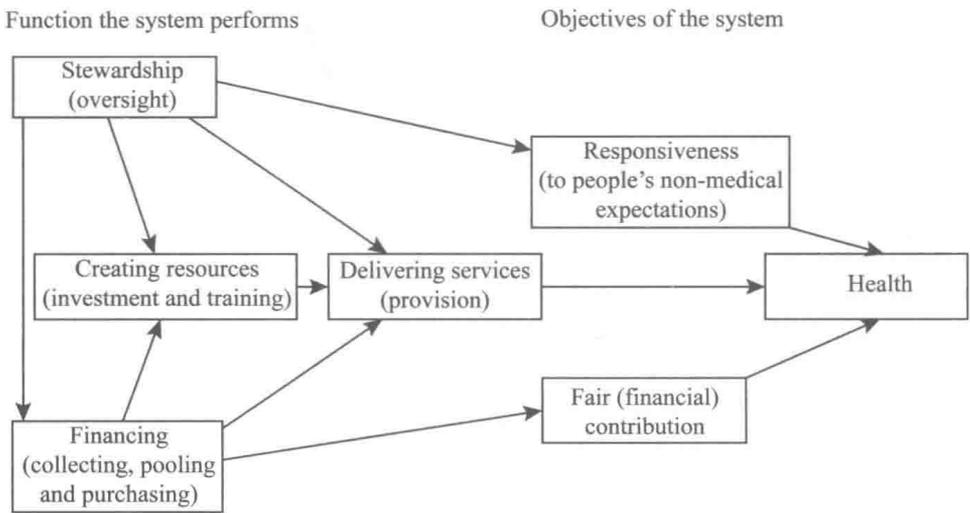


Figure 1-1 Relations between Functions and Objectives of Health System

#### 1.2.3.1 Providing Health Services

Health services include medical services and public health services, mainly cover the medical, prevention, health care, rehabilitation, family planning, infectious diseases prevention and controlling. Providing health services is the core function of the health system, but under different political and economic systems and population conditions, the focus of health services are not the same. The low income and less developed countries focus on the prevention and control of infectious diseases (such as malaria, AIDS, etc.). In the developed countries, the patterns and contents of health services provision have been changed from acute non-communicable diseases to chronic non-communicable diseases gradually.

### 1.2.3.2 Providing Medical Support

Providing health support in health system cover the following three aspects:

(1) Financing: medical insurance funds mainly come from 3 channels (government, society and individual), the individual payment proportion and catastrophic health expenditure incidence are closely linked with the poverty occurred rate due to illness.

(2) Establishing capital pool: coordinate the funds. Improving the overall level is the necessary measures to enhance the ability to adjust the fund, reduce the gap in the structure of funds, and enhance the ability to resist risks.

(3) The provision and purchase of services: the government should take into account, the health care needs of residents, as well as the impacts of different purchase programmes on health outcomes, and consider the cost effectiveness.

### 1.2.3.3 Raising resources

Total health cost is total health funds available in a country. To determine the total health cost, the national development strategy and the social development goals in a short period of time should be considered comprehensively. Health resources can be raised by the health system, which can be influenced by the health personnel training, health institutions' constructions and medical technology development.

### 1.2.3.4 Management

Management plays a special role in the functional location of health system, which is not only directly acting on the other 3 functions, but also has direct or indirect effects on all results. Management work includes building the operating rules, the strategic direction of health system, in order to promote the elements of the health system which carry out activities in accordance with the overall objectives.

## 1.2.4 Characteristics of Health System

### 1.2.4.1 The General Characteristics

Health system is open and complex. Firstly, the health system and the external political environment, economic environment and natural conditions are inextricably linked. National political system and macroeconomic policy determine the overall direction of the health system, while external human resources, material resources and other resources affect the resource structure and configuration of the health system. The epidemic and outbreak of disease also determine the key and emergency mode of health system. Secondly, the health system is not a single simplified system, its internal system interacts with each other. Drug supply system,