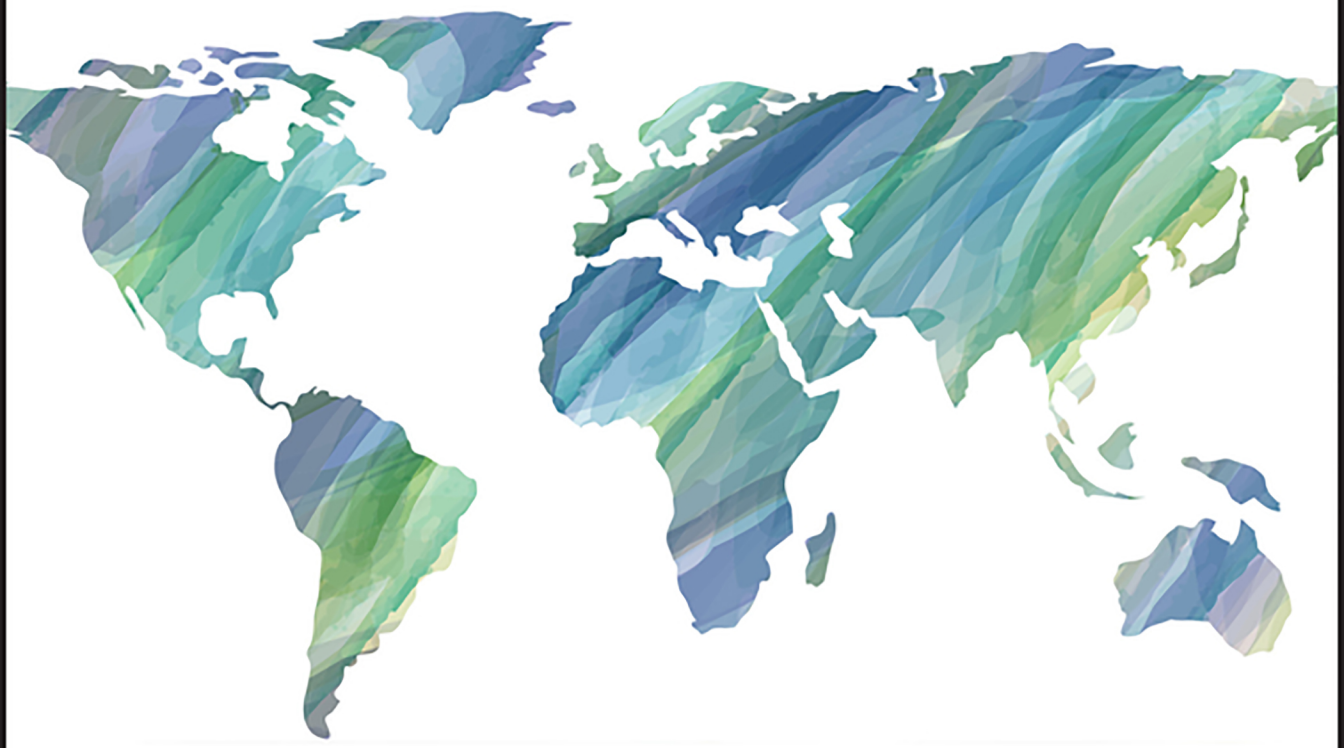

WORLD HEALTH SYSTEMS

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

Library of Congress Cataloging-in-Publication Data is Available:

ISBN 978-1-119-50887-8 (hardback)
ISBN 978-1-119-50890-8 (ePDF)
ISBN 978-1-119-50892-2 (ePub)

Cover Design: Wiley
Cover Image: © Creative-Touch/iStock.com

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

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Foreword

With the advent of the third healthcare revolution and its gradual inclusion in government agendas, the *World Health Report 2013* proposed a key issue of our time, namely, universal health coverage (UHC). The goal of UHC is to provide all people with access to necessary and affordable health services. UHC aims to reduce the inequalities in health coverage within an entire country or area and is a key component in sustainable development and poverty reduction.

As a basic socioeconomic system, a health system is intricately linked with the social, political, and economic development and policies of a specific period in time. It is clear that China is currently in a crucial transitional period of refining a socialist market economy that is operating within the context of rapid industrialization and urbanization. Hence, healthcare reforms in China still face three challenges when resolving the issues of limited access and high costs: First, there is a gap between the high demand for healthcare by the public and the limited capacity of the state. Second, there is a discrepancy between the public's medical needs and the supply of health services. Third, there is a conflict between the satisfaction of medical staff and the satisfaction of the public. A new solution for effectively resolving these differences is to strengthen governance at the source and enhance system construction. By changing the models of healthcare services and health-seeking behaviors, a health system can place greater emphasis on disease prevention and truly shift from a disease-centered model to a health-centered model. This shift, in turn, will enable the health system to achieve the original goal and ultimate target of providing higher-quality healthcare to the population.

There are inherent logical relationships between the healthcare and social security systems of a country and its political system, economic level, traditional history and culture, and other "native" factors. Nevertheless, the global issues encountered by China in healthcare reforms may have also occurred at some stage in certain developed countries or may currently exist in different forms or to different extents in certain developing countries that are also in transition. For example, these issues may involve the relationship between economic development and investment in healthcare, the balanced distribution of health resources, or the establishment of an orderly hierarchical medical system. Tackling these issues will require us to study and understand the recurring patterns in the development of medical and health services and social security systems from a global perspective. We should also draw extensively from the positive experiences of countries at different levels of development and incorporate these experiences within the real-life conditions of China and Shanghai.

This book starts from a multidisciplinary standpoint and provides a comprehensive explanation of the structures of health systems and the determinants of health. This book also summarizes the basic models and selection of world health systems and systematically compares the characteristics of health system models, development processes, reform measures, and performance evaluations of 12 representative developed countries and 18 representative developing countries. In addition, the book summarizes the common characteristics, experiences, insights, and developmental trends of health system reforms in countries with different levels of development in order to reflect on how these countries have overcome the universal challenges that all countries face. Clearly, this discussion is extremely insightful for our current journey as we explore the improvement of new healthcare reforms in China.

Here, three specific questions at different levels, which readers can discuss and explore, may be raised.

The first question is at the macro level: How can effective institutional arrangements between the government and the market be achieved in the field of healthcare? The world does not currently have an answer to this question. This issue is especially sensitive for China, which is now in a key period of transformation, so the slightest mistake in this regard may affect the progress of socioeconomic transition across the entire country. Among developed countries, the National Health Service in the UK emphasizes planned interventions, whereas the US has implemented a commercial health insurance system that focuses on market regulation. Among the BRICS countries (Brazil, Russia, India, China, and South Africa), the systems in China and Brazil are mainly based on the state's macroeconomic control, which is subject to moderate market regulation; India and South Africa primarily rely on the spontaneous regulation of the market; and Russia depends on the joint forces of market incentives and state regulation. However, there are substantial differences in the improvement of health performance among the BRICS countries, and these differences are not significantly associated with national income levels. On the surface, no two countries share the same health system. However, further investigation reveals that it is still possible to classify these systems and to identify the patterns resulting from their institutional development. The formation of these systems is generally closely related to two factors. The first is the country's level of economic development, and the second is the country's choice of political system. Does the country prioritize market competition to improve the efficiency of healthcare services, or does it prioritize balanced planning to improve the equality of healthcare services? Each country has to choose the emphasis on and extent of these two priorities. If we take the level of economic development as the vertical axis and the degree of marketization and planning in the health system as the horizontal axis, each country will find its own position within this coordinate system. This book aims to classify and explain these patterns by comparing the different health systems of different countries.

Are China's healthcare reforms currently experiencing over- or undermarketization? I believe that both aspects are present. Overmarketization is manifested in the imperfect compensation mechanisms of public hospitals, operational chaos in drug production, and artificially high drug prices, which have led to issues of fairness. Undermarketization is manifested in the inability to reflect the value of labor and technology, barriers to institutional approval, and staff turnover, which may result in lower service efficiency.

With regard to basic medical and health services guaranteed by the new healthcare reforms, government leadership should continue to be strengthened for public and quasi-public goods, with simultaneous efforts to resolve internal market failures and inadequacies. For the development of the health service industry, such as private healthcare institutions and high-end medical services, commercial health insurance, biomedicine, and information technology, China should rely more heavily on interventions by the invisible hand of the market to meet public demand for these diversified health services.

The second question is at the meso level: What direction should be taken in the development of administrative systems for health services and health security? In the early twenty-first century, the social and health insurance systems of Japan, Germany, and other countries combined the functions of healthcare and social security, which facilitated the centralization and coordination of health service provision, health insurance, and supervision by the government. Among developing BRICS countries, India has established an integrated health administrative system based on its national conditions (i.e., the Ministry of Health and Family Welfare), and Brazil has also established an administrative system that brings together healthcare, health insurance, and pharmaceuticals under the Ministry of Health. China's health management and health security are currently in a fragmented state. For instance, health insurance is scattered among a number of departments, including the National Health and Family Planning Commission, the People's Insurance Company of China, the Food and Drug Administration, and the Ministry of Civil Affairs, and this fragmentation can easily lead to divided policies and the waste of resources. The relevant departments are more inclined to promote isolated reforms from the perspective of localized interests. Hence, they may fail to integrate effectively into a continuous and coordinated system that is centered on patients' health, which is not beneficial to the efficiency and quality of the overall health system. If China can take advantage of this tide of comprehensive and deepened reforms, discard the obstacles of entrenched interests, and achieve breakthroughs in the organization of the medical and healthcare management systems, then, within the context of a large-department system, will China be able to reap more benefits in the promotion of synergistic and joint reforms in the fields of healthcare, health insurance, and medicine?

The third question is at the micro level: Can the more mature family physician and hierarchical medical system of developed countries be applied to developing countries, and can it be embedded within China's system of health and medical services? Although the family physician system originated in Europe, the US, and other developed countries, it is not exclusive to developed countries. For example, in Latin America, the Cuban government began implementing the family physician system in urban and rural areas in 1984 and promoted the system nationwide in the 1990s. In the face of China's aging population, the continuous increase in health needs, and the rise of medical costs, it is necessary to strategically shift forward the allocation of health resources, encourage high-quality medical resources to trickle down, strengthen the construction of the primary health care system, and enhance the public's health awareness and competency.

These measures will gradually realize the transformation from disease insurance to health insurance discussed in this book, which will ensure that health services will be more efficient, thereby reducing the economic burden of healthcare on China's residents. China's policy actions in the new healthcare reforms are to "safeguard basic health needs,

strengthen primary health care, and build a sound mechanism" in order to establish an orderly and effective system of medical and health services. The community general practitioner (GP) system may be a path for China's future healthcare reforms. Since the new healthcare reforms, Shanghai has been at the forefront of the country in its implementation of the GP system, and it has achieved a certain level of progress. However, many obstacles and doubts still remain. For example, there is the issue of introducing effective policies to ensure that becoming a community GP is the preferred career choice for an excellent doctor. In that case, the public will feel confident seeking medical treatments from these GPs, and only critically ill patients or difficult cases will be referred by the GPs to specialists in large hospitals.

Another issue is ensuring that the health insurance payment mechanism for GP services can be transformed from a fee-for-service system to the more advanced capitation system in order to implement a healthcare system that involves designated healthcare institutions, community first-contact care, and hierarchical referral systems. Finally, there is the issue of constructing the internal interest-oriented mechanisms of regional medical consortiums.

Can strong evidence or reasonable solutions to address these questions be found in this book? Should China rely on the experiences and initiatives of developed countries, or are the practices and patterns of developing countries more applicable? Where can we find more scientific and more rigorous evidence to support the government's determination to promote the reform ideas mentioned above? Readers who are interested in these questions can refer to the 2005 first edition and 2012 second edition of *Medical Service and Insurance System in Developed Countries and Areas*, which can be read in conjunction with this book. Different readers may have different reactions. This book is based on the admirable international vision upheld by Dr. XIAOMING SUN, his keen long-term observations on the reforms and developmental trends in international health systems, and his reflections on these observations, with a special emphasis on his focused research on developing countries in recent years. It systematically introduces much of the latest objective data, reform content, and empirical analysis, which further enables the book to be more comprehensive, rich, and detailed. Regardless of whether the readers are policymakers, scholars, or even members of the public, this book may provide each and every one of its readers with a valuable basis for the implementation of new healthcare reforms. Therefore, I am very glad to have been given the opportunity to write this Foreword. I also urge all readers to share with the author any ideas or opinions you may have after reading this book, which will allow us to contemplate and design more rational and scientific models together. Doing so will help us to promote new healthcare reforms in Shanghai, or even in China, and will encourage the active offering of advice and suggestions to the relevant decision-making departments of the government, thus enabling us to contribute to China's early establishment of a complete, scientific, and rational health system.

Professor YONGHAO GUI
Vice President of Fudan University
Dean of Shanghai Medical College
May 2019

Preface

China's national conditions have caused the vast majority of high-ranking health management positions to be held by medical experts. Each one of these experts had to face certain inner struggles when they were transferred from a clinical position to a management position, because being a physician is a skilled and dignified profession that is noble and highly respected. Thus, at the start of their appointments, such experts believe that health management is an experience that depends merely on prestige and power or that the work involved is more procedural and routine, with a low level of technical content. I was no exception. In the late 1980s, I faced these struggles as well when I transitioned from a role as a physician to a health management position.

When I was first introduced to the field of health management, my attitude was fundamentally changed. I began to like this discipline and gradually became hooked on it, even to the point of losing control. In early 1990, I was fortunate enough to receive the Sino-British Friendship Scholarship, which allowed me to systematically focus on this subject in the UK. Through this study, I discovered an inexhaustible system of scientific knowledge, and I came to realize that the research, innovation, and practice of health and insurance systems in the world were as diverse, variable, and progressive as art. This field had a "soul" that was filled with endless appeal.

After many years of study and accumulation, I wrote and published *Medical Service and Insurance System in Developed Countries and Areas* in 2005 and completed the revised edition, which included more novel and comprehensive content, in 2012. The book received a warm response and encouragement from academic peers, authorities related to healthcare reforms, and its readers. During the preparation work for the revised edition, I was inspired by Professor Liang Hong from Fudan University, which led to the following notion: Can further research be conducted on the health services and social security systems of developing countries? Under the constraints of economic development, have the vast number of developing countries also accumulated relevant experiences? Based on the considerations of the following aspects, I believe that the answer is affirmative.

First, the twenty-first century is the century of life and health sciences. On a micro level, this topic is reflected in the rapid development of gene technology. On a meso level, it is manifested as the dramatic improvements in new diagnostic and treatment methods, such as the rapid breakthroughs and popularization of organ transplants, catheterization, and minimally invasive techniques as well as the rapid progress of enhanced prevention and control in public health. On a macro level, the focus is on the design, practice, and continuous reform and improvement of health services and health insurance systems. Among the 191 sovereign nations in the world, no two countries have completely

identical medical and health systems. The establishment and development of a system is determined by the core values of a country and its citizens. This is also the case for the reformation of health and social security systems. The goal is to pursue fairness and efficiency. However, both cannot be achieved simultaneously, and a compromise has to be reached between the two. If this were not the case, there would not be so many systems in the world, and there would not be such extensive debates that make healthcare reform a global challenge. The US system, which emphasizes market efficiency, and the UK system, which emphasizes equitable planning, are the two most typical extremes of the numerous systems that exist in the world. The general directions of their current reforms are to learn from each other's strengths but to also abide by the bottom lines of their value orientations in order to take small steps toward a middle ground. The systems of other developed countries and areas are somewhere in between these two extreme systems. Of these systems, the most representative are the German and Canadian systems, and the others differ only in the extent of their tendencies in either direction. Over the past decade, the general orientation of global healthcare reforms has been to emphasize equitable planning and the responsibilities of the government due to the belief that people's right to health is part of their right to life. Hence, a certain level of efficiency can be sacrificed to ensure that each person's right to life is treated equally.

Since the 1990s, the economies of developing countries have generally shown continuous and rapid development, and their strengths have significantly increased. For example, in the past 10 years, the economic growth of Asian countries, such as China and India, has far outstripped the average levels of OECD countries. These countries are greatly influencing and promoting the reshuffling of global interests. Some studies have predicted that, by 2050, BRICS countries (Brazil, Russia, India, China, and South Africa) will be ranked as the world's strongest economies. Hence, there is reason to believe that the socioeconomic development of and the progress of civilization in developing countries will receive increasing international attention and concern. Within this overarching context, I believe that it will be consistent with the development needs of the future era if researchers are able to comprehensively and systematically present and analyze the models and reforms of health systems in developing countries at a higher level.

Second, from a practical standpoint, the new round of healthcare reforms in China has entered the "deep-water zone" and the "conflict-of-interest zone." Based on the country's national conditions, we need to absorb the concepts or practices of healthcare reforms that have been implemented internationally and have shown good results and that can also be reproduced and promoted in China. Although the numerous developing countries have different national conditions, all of them have undeveloped socioeconomic conditions, and, hence, all are faced with similar issues, such as economic transformation, a widening wealth gap, a large population with high mobility, an urban–rural dual structure, and so on. Each country is striving to try different solutions. Here, perhaps, lie the experiences and patterns in healthcare reforms that are suitable for us to learn from! For example, this book mentions that the healthcare institutions in South Africa and Egypt are implementing the separation of medical services and drug sales and the rigorous development of commercial health insurance; some developing countries in Eastern Europe and Latin America are developing the family physician system and have exerted good control over the increase in medical costs. These practical journeys in reform have immense research value in helping us to construct a medical and health system with both Chinese and contemporary characteristics.

Just as the models of developed countries should not be imitated, the paths taken by developing countries should also be modified. By analyzing both of these models in parallel and making mutual references, we can begin from a higher standpoint and can also adopt more rational thinking. By taking a wider perspective in research, we can present a more objective picture. After analyzing developing countries to a certain extent, this thought prompted me to extract the results from research on both types of countries and integrate them in this one book, *World Health Systems*. The value orientations contained within these systems are inextricably linked with the theories of political science and economics and are rooted within their respective socioeconomic development levels. Therefore, the point of departure for this book is still economic theory supplemented by political science, with the aim of conducting an in-depth exploration of health systems and reform measures that can balance both fairness and efficiency.

It should be noted that in the 30 years since the 1980s, reformation of the health and social security systems in developed countries and areas was relatively active. Various theories and reform practices were fully manifested during this period, and, hence, they comprise the foundation of the evolution and formation of current models. Therefore, 600 articles of the greatest significance have been carefully selected for this book from among the few thousand articles that have been published worldwide in the past 30 years. Referencing, collation, and analyses were then conducted by combining these articles with my own observations, experiences, and research during my 10 years of studies abroad in more than a dozen countries, including the UK, the US, Canada, and Australia. Furthermore, I have also focused on collecting and compiling official global socioeconomic development and health statistics released by the WHO, UNICEF, the World Bank, and other organizations, as well as health survey reports and policy options for specific areas or individual countries published by third-party nongovernmental organizations.

In contrast, due to economic and system changes, culture, language, and a variety of factors, data related to the status and reformation of health systems in developing countries are significantly sparser than data in developed countries are. In particular, it is difficult to find international reports related to countries with less developed economies, which has brought about significant difficulties when writing this book. Therefore, in the selection of typical developing countries, the BRICS countries were regarded as the iconic, leading countries in order to combine the principles of representativeness and regional balance.

This book is divided into five parts and includes a total of 21 chapters.

Part I focuses on analyzing the theoretical basis for the establishment of world health systems, introducing the world's socioeconomic development and health status on a macro level, and comprehensively elaborating the institutional structures of health systems and the determinants of health. In addition, Part I summarizes the basic models and selection of world health systems, policies for social medical aid systems, and the common characteristics of and trends in the health system reforms of countries with different levels of development. Parts II and III discuss the health systems of developed countries and areas. A systematic summary is presented on the role played by the governments of developed countries in the health service market, the basic policies of drug administration, and the models of healthcare cost containment. Then, using a storyboard format, we focus on each representative developed country and area and perform an in-depth analysis on the characteristics of its health system model. The analysis includes the mode of operation and development of the health policy systems and the reform measures and performance

evaluations at different stages. The aim is to present readers with a detailed description of each school of thought in order to extract the differences and features of different developed countries and areas. Parts IV and V discuss the health systems of developing countries, with a focus on the comparative study of the health service systems and their reform outcomes in BRICS countries. An overview is presented on the insights from the reform experiences of the health services and social security systems of developing countries. In addition, we explore the main structures, features, and value orientations of future reforms in the health systems of 18 representative developing countries.

Today, health economics and health management have become scientific disciplines with strict definitions and formal requirements in their quantitative methods and their systematic discussions. An increasing number of fields are involved in these sciences, and more esoteric methods are being used. This book focuses on introducing the ways of asking questions and the methods of solving problems that are employed by health and health insurance authorities in countries and areas with different levels of development. The ultimate aim of this book is to include a wide range of different perspectives and to be easily accessible to a wide audience. A detailed reference index has also been included at the end of the book, and interested readers may refer to the original literature.

I would like to express my gratitude to my alma maters, the Keele University Center of Health Planning and Management, the University of Leeds Nuffield Institute of Health Sciences, and the Harvard School of Public Health. Not only have the outstanding experts and professors in these institutions nurtured my academic talent, scientific thinking, and practical abilities, but they have also provided a large number of valuable references and data. During the process of writing this book, I have received the support of several leaders, experts, and scholars in China and abroad, especially that of the vice president of Fudan University, Professor Gui Yong-Hao, who also penned the Foreword. Professor Gui Yong-Hao has been a collaborator of mine for many years and has provided many valuable suggestions. In addition, I am grateful for the unwavering support of my colleagues at the Pudong Institute for Health Development, including Lou Ji-Quan, the executive vice president; Zhang Yi-Min; Li Yan-Ting; Liu Shan-Shan; Jing Li-Mei; Shu Zhi-Qun; Bai Jie; Ding Ye; and Qiao Yun. Dr. Zhang Yi-Min, in particular, assisted me by revising the logical framework of the entire book and undertaking manuscript compilation. In addition, I would like to thank Lei Peng, Zou Tao, Wang Xi, Chen Xi, Zhang Fen, Geng Huai-Zong, Lu Wei, Huang Jiao-Ling, and Liu Rong, who were involved in the data collection, data processing, and proofreading of some chapters. Furthermore, I am grateful for my colleagues at the original Shanghai Municipal Health Bureau, who provided their assistance in the writing of the first two editions of the monograph on developed countries and areas. I hereby express my sincerest gratitude for your hard work and selfless help.

Due to the wide range of areas, abundant statistics, and numerous references covered in this book, as well as the author's limited awareness and knowledge, it is inevitable that many mistakes will be made. I invite all experts, peers, and general readers to correct any mistakes they encounter.

XIAOMING SUN
May 2019

About the Book

This book is divided into five parts – Overview, Characteristics of Health Systems in Developed Countries and Areas, Health Systems in Developed Countries and Areas, Characteristics of Health Systems in Developing Countries, and Health Systems in Developing Countries – which are divided into a total of 21 chapters.

Part I is the book's overview and includes six chapters. In this part, we explore the theoretical basis for the establishment of world health systems from a multidisciplinary perspective, introduce the world's socioeconomic development and health status on a macro level, and comprehensively elaborate the institutional structures of health systems and determinants of health. In addition, Part I also summarizes the basic models and selection of world health systems, the policies for social medical aid systems, and the common characteristics of and trends in health system reforms in countries with different levels of development.

Parts II and III include eight chapters and mainly focus on the health systems of developed countries and areas. First, we present a systematic summary of the role played by the governments of developed countries in the health service market, basic policies of drug administration, and models of healthcare cost containment. Based on the classification of health systems into five categories (national health service, social health insurance, commercial health insurance, savings health insurance, and other improved models), we use a storyboard format to focus on each representative developed country and area (the UK, Canada, Australia, Sweden, Germany, France, Japan, Poland, the US, Singapore, Hong Kong, and Taiwan) in order to perform an in-depth analysis of the characteristics of each country's health system model. The analysis includes the mode of operation and development of the health policy systems and the reform measures and performance evaluations at different stages. The aim is to present readers with a detailed description of each school of thought in order to extract the differences and features of different developed countries and areas.

Parts IV and V include seven chapters and mainly focus on describing the health systems of developing countries. We provide definitions of the social formations and structures of developing countries and focus on the comparative study of the health service systems and their reform outcomes in the BRICS countries (Brazil, Russia, India, China, and South Africa). An overview of insights from the reform experiences of the health services and social security systems of developing countries will also be presented. In addition, we perform detailed and in-depth explorations of the main structures, features, and value

orientations of future reforms in the health systems of 18 representative developing countries. Like the iconic BRICS countries, these countries are grouped into four regions – namely, Asia (China, India, Thailand, Vietnam, the Philippines, Armenia, and Kyrgyzstan), Africa (South Africa, Egypt, and Morocco), Europe (Russia, Hungary, the Czech Republic, and Bulgaria), and America (Brazil, Cuba, Chile, and Mexico).

About the Author

XIAOMING SUN is Shanghainese. He graduated from Shanghai Medical University in the 1980s with a Bachelor of Medicine. He furthered his studies in the UK between 1990 and 1997. In 1993, he received a Master's in General Practice (M.Sc.) from the University of Leeds. In 1996, he was awarded a PhD in Health Planning and Management from Keele University and remained at the university as a Research Fellow. During his time in the UK, he joined the Royal Society of Medicine, where he began attending international academic conferences and publishing academic papers. From 2007–2008, he was a Takemi Fellow at the Harvard School of Public Health, where he conducted research and practice for one year. In 1997, he was employed by the Shanghai Municipal People's Government and undertook management in the health administration department. He was promoted to chief physician in 2000. In 2005, he became a professor at Fudan University and a doctoral supervisor at the School of Public Health, as well as a professor and chief physician at Zhongshan Hospital, which is affiliated with Fudan University. In 2013, he was a doctoral supervisor for the Department of General Practice at Fudan University. In addition, he has also served as the vice president of the Shanghai Medical Association, the vice president of the Shanghai Medical Doctor Association, the vice chairman and committee member of the Chinese Medical Association General Practice Branch, the president of the Shanghai Community Health Association, and in other roles.