COMPARATIVE HEALTH SYSTEMS

SECOND EDITION

A Global Perspective

Edited by

James A. Johnson, PhD, MPA, MSc
Medical Social Scientist and Professor
School of Health Sciences
Central Michigan University
Mount Pleasant, Michigan
and
Visiting Professor
St. George's University
Grenada, West Indies

Carleen H. Stoskopf, ScD, MS
Professor and Chair
Health Management and Policy
San Diego State University
San Diego, California

Leiyu Shi, DrPH, MBA, MPA
Professor
Bloomberg School of Public Health
Johns Hopkins University
and
Director
Johns Hopkins Primary Care Policy Center
Baltimore, Maryland

JONES & BARTLETT
LEARNING

World Headquarters
Jones & Bartlett Learning
5 Wall Street
Burlington, MA 01803
978-443-5000
info@jblearning.com
www.jblearning.com

Jones & Bartlett Learning books and products are available through most bookstores and online booksellers. To contact Jones & Bartlett Learning directly, call 800-832-0034, fax 978-443-8000, or visit our website, www.jblearning.com.

Substantial discounts on bulk quantities of Jones & Bartlett Learning publications are available to corporations, professional associations, and other qualified organizations. For details and specific discount information, contact the special sales department at Jones & Bartlett Learning via the above contact information or send an email to specialsales@jblearning.com.

Production Credits
VP, Executive Publisher: David D. Cella
Publisher: Michael Brown
Associate Editor: Danielle Bessette
Production Manager: Carolyn Rogers Pershouse
Director of Vendor Management: Amy Rose
Vendor Manager: Juna Abrams
Senior Marketing Manager: Sophie Fleck Teague
Manufacturing and Inventory Control Supervisor: Amy Bacus
Composition: Integra Software Services Pvt. Ltd.
Project Management: Integra Software Services Pvt. Ltd.
Cover Design: Kristin E. Parker
Director of Rights & Media: Joanna Gallant
Rights & Media Specialist: Wes DeShano
Media Development Editor: Shannon Sheehan
Cover Image: ©
Printing and Binding: RR Donnelley
Cover Printing: RR Donnelley

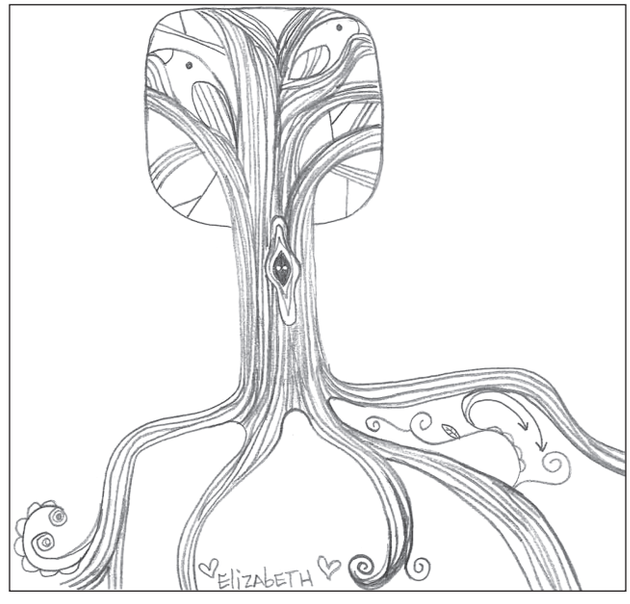
Library of Congress Cataloging-in-Publication Data
Names: Johnson, James A., 1954- editor. | Stoskopf, Carleen H. (Carleen Harriet), 1953- editor. | Shi, Leiyu, editor.
Title: Comparative health systems : a global perspective / [edited by] James Johnson, Carleen Stoskopf, Leiyu Shi.
Other titles: Comparative health systems (Johnson)
Description: Second edition. | Burlington, MA : Jones & Bartlett Learning LCC, [2018] | Includes bibliographical references and index.
Identifiers: LCCN 2016054758 | ISBN 9781284111736 (paper back)
Subjects: | MESH: Delivery of Health Care—organization & administration | Health Policy | Internationality | Cross-Cultural Comparison
Classification: LCC RA441 | NLM W 84.1 | DDC 362.1—dc23 LC record available at https://lccn.loc.gov/2016054758

6048

Printed in the United States of America
21 20 19 18 17 10 9 8 7 6 5 4 3 2 1

To Elizabeth

June 19, 1989 – March 29, 2014



Drawing by Elizabeth Johnson, University of Montevallo, '13

-J.A.J.

Contents

European Region

Middle East and Africa

Asia and Pacific Region

Acknowledgments

We would like to thank all of the authors from around the world for their invaluable and insightful contributions to this book. We also want to thank Danielle Bessette for her exceptional job and hard work as associate editor. Danielle brought her own perspectives and much appreciated professionalism to this project, often serving in the valued role of fourth editor. We also want to thank George Jacob and Athena Lakri for their valuable and skillful input. Additionally, we thank Michael Brown of Jones & Bartlett Learning for his support as we worked our way through this multifaceted international undertaking.

Foreword

Drs. David and Kathleen Jordan

As we write this foreword, we are viewing a world with global climate change, income inequalities, gaps in educational opportunities for girls, societal unrest, and an unprecedented number of refugees who are seeking personal and economic safety from war-torn regions from around our world. Any of these social determinants has a direct effect upon the health of individuals in every corner of the globe—from the remote steppes of Mongolia to the bourgeoning urban settings in South America and Asia. Health care is no longer a local or even a national phenomenon; it is a global network of disparate groupings of practitioners, systems, facilities, governmental funding approaches, non-governmental organizations, shamans, midwives, technological wonders, and cultural beliefs. To attempt to understand the myriad aspects of global health care is akin to unraveling the untold mysteries of human DNA and the very essence of what makes us human.

Understanding global health systems, outcomes, and practices is a complex and multidimensional exercise worthy of social scientists capable of grasping both the balcony views and the ground-level realities of the social determinants that affect the health of the world's 7.4 billion men, women, and children. Dr. James Johnson is one such individual who has spent a lifetime attempting to make sense of the multiple metrics which contribute to our understanding of global health systems. This latest edition of *Comparative Health Systems* provides an important reference for practitioners, scholars, academics, researchers, and students whose work rests in understanding global health care.

We are social entrepreneurs, college educators, and health and human service executives and are deeply invested in addressing economic, social, and healthcare outcomes in underresourced countries around the world. We work in areas of the developing world where natural and child mortality rates are frustratingly high.

The second edition of *Comparative Health Systems*, edited by James Johnson, Carleen Stoskopf, and Leiyu Shi, offers one of the few comprehensive sources of both statistical information and anecdotal narrative behind the data. This new edition will replace our current dogged-eared copy of the first edition and will gain its new place in our library bookshelf in the years to come. It is—much like James himself—a treasure to us both. He has been an invaluable mentor, former professor, and trusted friend over the years.

If you are a student trying to broaden your understanding of global health, a practitioner researching information on a country in which you may work, or a researcher attempting to understand the dynamics associated with health care around the globe, this is the text you need in your backpack, your office, or in the hands of your students.

—Dr. David A. Jordan and Dr. Kathleen M. Jordan
Founder/President (David) and
Executive Vice President (Kathleen)
Seven Hills Foundation

Foreword

Dr. Ted Karpf

This is a most timely book. Drs. Johnson, Stoskopf, and Shi have anticipated and documented the core concerns faced by nations. Health and health care are at the forefront of international concern, especially in a time of global financial turmoil and insecurity. This book is absolutely essential to understanding what's at stake and to charting a path through the maze of issues confronting healthcare planners and healthcare recipients, healthcare professionals and financing managers, politicians, and bureaucrats. It's more than a matter of systems and approaches; it is about the security of the global community. According to Dr. Margaret Chan, director-general of the World Health Organization:

> Healthy human capital is the very foundation for productivity and prosperity. Equitable distribution of health care and equity in the health status of populations is the foundation for social cohesion. Social cohesion is our best protection against social unrest, nationally and internationally. Healthy, productive, and stable populations are always an asset but they must especially be so during a time of crisis.

The recipients of health care must be heard above the din of competing claims of equity and effectiveness:

> The people have the right and duty to participate individually and collectively in the planning and implementation of their health care. Primary health care… requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation, and control of primary health care, making fullest use of local, national, and other available resources; and to this end develops through appropriate education the ability of communities to participate." (Declaration of Alma-Ata International Conference on Primary Health Care, Articles IV and VII, Alma-Ata, Khazakhstan, USSR, September 6–12, 1978)

Obtaining decent care, which acknowledges the voice of the people through the values of agency and dignity, interdependence and solidarity, subsidiarity and sustainability, raises the ante a bit higher. Political and healthcare leaders, financial managers, and medical and healthcare professionals must be reminded amidst the policy debate that when the people are invested in their own care, the formulas for success and sustainability change. When the people are engaged in determining the levels and resource allocations for care, there is also more decision latitude than those charged with determining formulas can imagine.

The healthcare debate must finally factor in the people who it claims are to be served and sustained with improved health. Then the various financial models and healthcare systems will still not bring us the long-needed satisfaction and support we need today. Nobel Laureate and former U.S. president Barack Obama stated repeatedly that "health care is a right." This notion, enshrined three decades ago at Alma-Ata, changes the rules and reorganizes the lines of accountability along with our thinking and expectations. Where health is a right, social responsibility will lead to an enhanced commitment to improved health. The formula ceases to be about "those people" or "their problems" and becomes about us!

As we proceed through these pages it will be important to ask how this approach will help ensure that the people are heard and heeded.

—Dr. Ted Karpf
International health advocate (retired),
World Health Organization, and author of
the book *Restoring Hope: Decent Care
in the Midst of HIV/AIDS*

Preface

Dr. James A. Johnson

Over the past two decades, I have taken graduate students to Geneva, Switzerland, each summer to study global health. While there, we always spend time at the World Health Organization (WHO), which is receiving updates on global health and interacting with senior scientists, health practitioners, and leaders in the mission of "health for all." In addition to being spellbound by descriptions of the many initiatives and great successes of the WHO, we repeatedly hear of one major limitation that continues to impede even the greater progress. That is the poor state of health systems in many parts of the world. There are models of success as well as models of failure. Most health systems are oriented toward disease care, and many are underfunded and understaffed, whereas some countries expend large portions of their national resources on health. Some health systems are operated by governments, and others are more involved in the private sector. Regardless of scope or scale, every program, every initiative, every policy, and every course of treatment are imbedded within a particular country-specific health system.

Several years ago, my friend and colleague Dr. Carleen Stoskopf joined me on one of the trips to Geneva. While there, we discussed the need for a book that would describe a range of health systems so that students could better understand the limitations and opportunities offered in the diversity that we had each seen in our own international work. We felt that one of the best ways for students to learn about the range of systems would be through comparative study. As with many invigorating sidewalk café conversations in Europe (and elsewhere), we set this idea aside and returned to the busy activities of our academic positions at the time—Carleen, a department chair at the School of Public Health at the University of South Carolina in Columbia, South Carolina, and myself, a department chair at the Medical University of South Carolina in Charleston. A few years later, however, at a meeting of the American Public Health Association in Boston, in a conversation with publisher Michael Brown, the topic came back up and momentum for such a book grew quickly.

We conceptualized the book as a text to be used in courses in international health, comparative studies, global health, international affairs, health administration, and public health. In an increasingly interconnected and interdependent world comprised of wide variations in health delivery systems, practices, and policy, the book was developed to offer students some understanding through comparative study.

In seeking to achieve this goal, we enlisted contributors from many countries to write about the systems that they had worked in and were familiar with. Thus, every chapter that describes a health system is written by at least one person from that country. Chapters also ended up having U.S.-based coauthors because we used our own professional networks in schools of public health, medicine, administration, and policy to identify chapter contributors. Needless to say, the book project emerged as a significant multicultural undertaking involving authors from every continent and from the largest possible range of health system types. This led to the publication of the first edition of *Comparative Health Systems: Global Perspectives* in 2010.

Over five years later, we were asked by the publisher to write the *Second Edition*. For this undertaking, I asked another friend and colleague that goes back to our South Carolina days to join Carleen and me. This third editor is Leiyu Shi, now at Johns Hopkins University. He brought his usual high energy and global viewpoint to the project.

Following the conceptual structure of the *First Edition*, we continued to use the framework Carleen and I had previously developed. This framework for each chapter allows students to compare and contrast such divergent systems as Canada, India, Japan, Nigeria, Germany, Australia, Mexico, and many others. The framework used to develop each chapter country focused includes the following:

Country Description

- History
- Size and geography
- Government and political system

- Macroeconomics (GDP, OECD)
- Demographics (including religion, gender, and poverty)

Brief History of the Healthcare System

- Description of healthcare system
- Facilities
- Workforce
- Technology and equipment

Evaluation of the Healthcare System

- Cost
- Quality
- Access
- Current innovations and emerging challenges

Although these chapters were developed by in-country authors and their collaborators, additionally, working with colleagues, we developed other chapters that are overarching. This includes a chapter that describes health systems and one that provides an overview of disease. Dr. Walter Jones contributed a very useful chapter discussing health policy and economics. My son, Dr. Allen Johnson, and coauthors contributed a chapter describing the role of nongovernmental organizations (NGOs) as an important, though sometimes overlooked, component to health systems and global health. Dr. Caren Rossow and I also added a chapter on health systems in crisis and disaster response. Additionally, Carleen and I included a chapter that outlines future challenges. There is also a glossary of health systems terms that should be useful to students and professors.

Having worked in or traveled to over 45 countries myself, I can say with great confidence that this book will serve to broaden the reader's understanding. It will also likely change their perspectives on global health. They will learn that although highly developed countries continue to offer profound breakthroughs in medical science and technology, as well as reform and continuous improvement of health systems, the best solutions do not always emerge in the wealthiest countries. In the *Harvard International Review*, Dr. Vanessa Kerry, founder and CEO of Seed Global Health, stated "I think the most important thing is for people to realize that to be in global health, you can come from any field or background. In order to have an impact on global health, we need to, again, realize that there is a fundamental breakdown of the system on any number of levels in different countries."

As stated by Dr. Barry Bloom, former dean of the Harvard School of Public Health, the huge disparities in health that exist between countries remain some of the great moral and intellectual problems of our time. This book can serve as one tool among many that will be needed to empower students to become change agents in this ongoing challenge.

—Dr. James A. Johnson

Contributors

Musah Sugri Alhassan, MSA
Ghana National Association of Teachers—GNAT
Tamale, Ghana

Stephanie Baiyasi, DVM
University of Denver
Denver, Colorado, United States

Antonio Pires Barbosa, PhD, MD
Universidade Nove de Julho
São Paulo, Brazil

Steven D. Berkshire, EdD, MHA, FACHE
Central Michigan University
Mt. Pleasant, Michigan, United States

Raul Chiquiyauri, MD, MPH, PhD
Centro de Investigación de Enfermedades Tropicles
Instituto Nacional de Salud
Sede Iquitos, Peru

Omur Cinar Elci, MD, PhD
St. George's University School of Medicine
True Blue, Grenada

Maria Creavin, RD, SM, MAS
Central Michigan University
Mount Pleasant, Michigan, United States

Mark Anthony Cwiek, JD, MHA
Central Michigan University
Mount Pleasant, Michigan, United States

Gary E. Day, DHSM, MHM, RN, EM, FGLF, FCHSM
School of Medicine, Griffith University
Southport, Queensland, Australia

José Delacerda-Gastelum, PhD, MILR
ITESO University
Guadalajara, Mexico

Linda F. Dennard, PhD
Auburn University Montgomery
Montgomery, Alabama, United States

James E. Dotherow IV, MPA
So They Can (NGO)
Babati, Tanzania

Mazwell Droznin, BA
Rollins College
Winter Park, Florida, United States

R. Paul Duncan, PhD, MS, BA
University of Florida
Gainesville, Florida, United States

Sharon R. Elefant, DHAc,
Central Michigan University
Mt. Pleasant, Michigan, United States

Harry Flaster, MD
University of Washington Medical Center
Seattle, Washington, United States

Leonard Friedman, PhD, FACHE
George Washington University
Washington, DC, United States

Lesego Gabaitiri, PhD, ScM, MSc, BA
University of Botswana
Gaborone, Botswana

Sheyna Gifford, MD, M.Sc., MA, MBA
St. Louis Science Center
St. Louis, Missouri, United States

Octavio Gomez-Dantés, MD, MPHA
Carso Health Institute
Mexico City, Mexico

Mikiyasu Hakoyama, PhD
Central Michigan University
Mt. Pleasant, Michigan, United States

Whiejong M. Han, PhD
University of South Carolina
Columbia, South Carolina, United States

Umar Haruna, PhD, MPhil
University for Development Studies
Upper West, Ghana

Kuo-Cherh Huang, DrPH, MBA
Taipei Medical University
Taipei, Taiwan

Manzoor Hussain, MBBS, FRCP, FRCPCH
Bangladesh Institute of Child Health
Dhaka, Bangladesh

Styn M. Jamu, DHA, MPA
Stepping Stones International
Gaborone, Botswana

Allen Johnson, DrPH, MPH
Rollins College
Winter Park, Florida, Untied States

Walter J. Jones, PhD, MHSA, MA
Medical University of South Carolina
Charleston, South Carolina, United States

Kalu Kalu, PhD, MBA
Auburn University Montgomery
Montgomery, Alabama, United States

Bernard J. Kerr Jr., MHA, MBA, MPH, MIM, EdD, FACHE
Central Michigan University
Mt. Pleasant, Michigan, United States

Sophie Kobouloff, DHA, MBA, EDHEC MBA
Saddle Implant Technologies
Geneva, Switzerland

Hailun Liang, MS
Johns Hopkins School of Public Health
Baltimore, Maryland, United States

Gerald Ledlow, PhD, MHA, FACHE
University of Texas Health Science Center Northeast
Tyler, Texas, United States

Osnat Levtzion-Korach, MD, MHA
Hadassah Medical Center
Jerusalem, Israel

Marcus Longley, PhD
Welsh Institute for Health and Social Care
University of South Wales
Pontypridd, Wales, United Kingdom

John Lopes, Jr., DHSc, PA-C
Central Michigan University
Mt. Pleasant, Michigan, United States

Ning Lu, PhD, MPH
Governors State University
University Park, Illinois, United States

Hala Madanat, PhD, MS
San Diego State University
San Diego, California, United States

Linda A. McCarey, MS, BSN, RN
Haliburton, Kawartha, Pine Ridge Health Unit
Haliburton, Ontario, Canada

John E. McDonough, DrPH, MPA
Harvard University
Cambridge, Massachusetts, United States

Hani Michel Samawi, PhD, MS
Georgia Southern University
Statesboro, Georgia, United States

Amal K. Mitra, MD, MPH, DrPH
Jackson State University
Jackson, Mississippi, United States

Michael E. Morris, PhD, MPH, MPA
University of Florida
Gainesville, Florida, United States

Adrienne Nevola, MPH
University of Arkansas
Fayetteville, Arkansas, United States

Marcia Cristina Zago Novaretti, PhD, MD
Universidade Nove de Julho
São Paulo, Brazil

Qwolabi Ogunneye, MD, FRCP, FASN
Covenant Healthcare
Saginaw, Michigan, United States

Yetunde Ogunneye, MD, DHAc, MPH
Central Michigan University
Mt. Pleasant, Michigan, United States

Elena A. Platonova, PhD, MHA
University of North Carolina, Charlotte
Charlotte, North Carolina, United States

Hugo Rodriguez, MD, MPH
Hospital Iquitos
Iquitos, Peru

Caren Rossow, DHA, MSA, RN, FACHE
Indiana University
South Bend, Indiana, United States

Alexander V. Sergeev, MD, PhD, MPH
Ohio University Department of Social and Public Health
Athens, Ohio, United States

Neelam Sharma, MD
Newark-Wayne Community Hospital
Newark, New Jersey, United States

Hatice Simsek, MD, PhD
Dokuz Eylül University School of Medicine
İzmir, Turkey

Douglas A. Singh, PhD
Indiana University, South Bend
South Bend, Indiana, United States

James H. Stephens, DHA, MHA
Georgia Southern University
Statesboro, Georgia, United States

Reyhan Ucku, MD, MPH
Dokuz Eylül University School of Medicine
Izmir, Turkey

Stalin Vilcarromero, MD, MPHc
Naval Medical Research
Iquitos, Peru

Matthew W. Walker, DrPH, MPH
U.S. Food and Drug Administration
Silver Spring, Maryland, United States

Sudha Xirasagar, PhD, MBBS
University of South Carolina
Columbia, South Carolina, United States

Kapil Yadav, MD
Tulane University
New Orleans, Louisiana, United States

About the Editors

James A. Johnson, PhD, MPA, MSc, is a medical social scientist and professor of health administration and international health at the Dow College of Health Professions, Central Michigan University, and visiting professor at St. George's University, Grenada, West Indies. He was previously chairman of the Department of Health Administration and Policy at the Medical University of South Carolina. Dr. Johnson teaches courses in health organization development, international health, systems thinking, and comparative health systems. His publications include over 100 journal articles, most of which are peer reviewed, and 15 books on a wide range of healthcare and organizational issues. His most recent books include *Public Health Administration: Principles of Population-Based Management*; *Introduction to Public Health Management, Organizations, and Policy*; *Multisector Casebook in Health Administration, Leadership, and Management*; and *Organizations: Theory, Behavior, and Development.* He is also coeditor of the widely used *Handbook of Health Administration and Policy*. Dr. Johnson has also served as editor of the *Journal of Healthcare Management*, published by the American College of Healthcare Executives; editor of the *Journal of Management Practice*; and founding editor of the *Carolina Health Services and Policy Review*. He is a contributing editor for the *Journal of Health and Human Services Administration*. He has served on the Board of Directors for the Association of University Programs in Health Administration and the Scientific Advisory Board of the National Diabetes Trust Foundation. Dr. Johnson has worked and traveled in 45 countries, including Tanzania, Zimbabwe, South Africa, Nepal, China, Belize, Peru, Ethiopia, Turkey, and Mexico and has lectured at Oxford University (England), University of Dublin (Ireland), Beijing University (China), and University of Colima (Mexico). He also works on projects with the WHO and the Belize-based NGO, Heart to Heart and is active in the Organization Development Institute. He completed his PhD in 1987 at the Askew School of Public Policy and Administration at Florida State University and his MPA in health administration at Auburn University.

Carleen H. Stoskopf, ScD, MS, is Professor of Health Management and Policy and Division Head in the Graduate School of Public Health at San Diego State University, where she also served as School Director for 7 years. Dr. Stoskopf held academic appointments at the Arnold School of Public Health at the University of South Carolina for 19 years, advancing to Chair of the Department of Health Services Policy and Management. Dr. Stoskopf has served as a Fellow of the Commission on Accreditation of Health Management Education and served as a site visitor for the Council on Education in Public Health reaccreditation process. Her areas of teaching include finance, health insurance, and reimbursement. At the University of South Carolina, she was Director of Doctoral Programs and developed two additional doctoral programs in Taiwan and South Korea. Prior to entering her career in academics, Dr. Stoskopf served in the U.S. Navy as an Environmental Health Office with the Third Marine Aircraft Wing at El Toro, California and as Chief of the Preventive Medicine Service at the Naval Regional Medical Center in Okinawa, Japan. She was honorably discharged as a Lieutenant, USN, MSC in 1982. She was also a Registered Sanitarian with the State of California.

Internationally, Dr. Stoskopf has worked extensively for USAID and a variety of agencies in countries such as Haiti, Kenya, South Africa, the United Arab Emirates, Oman, Kuwait, Jordan, People's Republic of China, the Republic of China, Republic of South Korea, Republic of Georgia, Kazakhstan, Ukraine, and Russia. Dr. Stoskopf's activities have ranged from lecturing, providing healthcare management training, healthcare management curricular reviews and development, policy and curriculum consultations with new schools of public health, public health assessments, HIV/AIDS research, and hospital management consultations.

Dr. Stoskopf has been an active researcher conducting studies in access, utilization, and outcomes of healthcare services. Specific areas of research include disparities in vulnerable populations such as persons living with HIV/AIDS, living with mental illness, in

poverty, older persons, and African Americans living in the southern United States. Dr. Stoskopf's research has been funded from such sources as the National Institutes of Health, Centers for Disease Control and Prevention, the Health Resources and Services Administration, as well as a number of state and local agencies and foundations. Dr. Stoskopf has authored or co-authored over 50 peer-reviewed publications in academic journals. She completed her doctor of science (ScD) degree from The Johns Hopkins University Bloomberg School of Public Health in 1989 in the Department of Health Policy and Management, and earned her MS degree from the University of Minnesota School of Public Health in 1977 in environmental health biology.

Leiyu Shi, DrPH, MBA, MPA, is professor of health policy and health services research in the Department of Health Policy and Management, Bloomberg School of Public Health at Johns Hopkins University. He is also director of The Johns Hopkins Primary Care Policy Center. Prior to his academic positions, Dr. Shi worked in the public health field focusing on community-based primary care and vulnerable populations. He received his doctoral education from the University of California, Berkeley, majoring in health policy and services research. He also has a master's in business administration focusing on finance. Dr. Shi's research focuses on primary care, health disparities, and vulnerable populations. He has conducted extensive studies about the association between primary care and health outcomes, particularly on the role of primary care in mediating the adverse impact of income inequality on health outcomes. Dr. Shi is also well known for his extensive research on the nation's vulnerable populations, in particular community health centers that serve vulnerable populations, including their sustainability, provider recruitment and retention experiences, financial performance, experience under managed care, and quality of care. Dr. Shi is the author of 9 textbooks and more than 150 scientific journal articles.