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Pu-Xuan Lu  
Wei-guo Tan  
*Editors*

# Tuberculosis Control in Migrating Population



PEOPLE'S MEDICAL PUBLISHING HOUSE



Springer

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## Preface

With the rapid development of economy, international communication, tourism, migration, and labor, as well as world population mobility increase significantly. Such migration and mobility pose a serious challenge to the prevention and control of tuberculosis. Shenzhen, a new and open city in southern China near Hong Kong, has more than 10 million immigrants from all over China. Only a few cities in China and even in the world have such large population of immigrants. Large-scale population mobility makes tuberculosis epidemic control much more difficult. It can seriously endanger human health. We have carried out a systematic research on this important issue in human health for many years, constructed and implemented tuberculosis control strategy, initiated tuberculosis management and control model, and set up a tuberculosis control strategy for migrating population. Such strategy of monitoring system for tuberculosis control of migrating population in China has greatly reduced the epidemics of tuberculosis in the migrating population in Shenzhen; therefore, the incidence of tuberculosis has been effectively controlled. Such successful results have been well recognized by the WHO and the China Tuberculosis Control Organization.

In order to achieve the important WHO goal of “Eradicating Tuberculosis” by 2035, we need to make a marked progress in the discovery, registration, referrals, reception, and management of tuberculosis patients in migrating population. Additionally, it is of great importance to promote the strategy and measures for the advanced management and control of tuberculosis in the migrating population. Hence, we have organized data from more than 40 senior scholars who are actively in tuberculosis prevention and control and clinical research, including experts in prevention and control, infectious diseases, pulmonary, imaging, pathology, and experimental research. We also compiled the latest research results in tuberculosis prevention and control from China and abroad and composed a book entitled “*Tuberculosis Control in migrating population.*” The book is divided into ten chapters covering the epidemic of tuberculosis in migrating population, the strategies and technologies for control of tuberculosis, the diagnosis and treatment of tuberculosis, the management of tuberculosis in migrating population, and the prevention and control of tuberculosis in schools. We also present a new technology of emergency treatment during public health emergency, prevention and control of drug-resistant tuberculosis, double infection of TB/HIV, and so on. During the course of writing this book, we tried to keep track of the latest developments in the TB control in migrating population, prevention and treatment of drug-resistant tuberculosis, and HIV-associated tuberculosis.

This book is the first one in China and abroad focusing on prevention and control of tuberculosis among migrating population. This book provides comprehensive introduction and elaboration of prevention and control strategies, as well as integrates various research results. We compiled this book in such a way that it contains abundant content, several outstanding points, the lush pictures, strong practicability, and unique characteristic. It is a valuable book for medical workers and medical students in tuberculosis prevention and control, respiratory and infectious disease control, imaging department, laboratory, pathology

department, and other medical workers. At the same time, it is intended to provide a useful reference for the relevant medical workers in the world, especially in the “*the Belt and Road*” countries and regions.

Shenzhen, China  
Shenzhen, China  
Shenzhen, China  
May 12, 2019

Wei-ye Yu  
Pu-Xuan Lu  
Wei-guo Tan

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## About the Editors



### **Wei-ye Yu, MD, PhD** Appointments and Positions:

- Director of Shenzhen Center for Chronic Disease Control. Chief Physician, Professor
- Master Student Supervisor of Guangdong Medical University

### Research Directions:

- Prevention, clinical treatment, and scientific research of tuberculosis (including extrapulmonary tuberculosis such as tuberculous meningitis, bone tuberculosis, and genitourinary tuberculosis)

### Research Productions:

- Professor Yu has published more than 50 papers which are related to tuberculosis prevention, diagnosis, or treatment. As a co-editor-in-chief, he has published six medical monographs, among which the monograph entitled *Diagnostic Imaging of Emerging Infectious Diseases* was published by Springer. He has completed or is hosting lots of research projects, including the National Major Scientific and Technological Special Project during the Eleventh and Twelfth Five-Year Plan Period and the National Key Research and Development Plan Project. Furthermore, he has won seven awards, including the second prize of the Scientific and Technological Progress Award of the Chinese Anti-Tuberculosis Association in 2017, the second prize of the Scientific and Technological Progress of Shenzhen Municipality in 2014, the third prize of the Scientific and Technological Progress of Guangdong Province in 2013, the third Prize of the Scientific and Technological Progress Award of the Chinese Preventive Medicine Association in 2007, the third prize of the Scientific and Technological Progress Award of Guangdong Province in 2007, the third-class merit from the People's Government of Guangdong Province, and the third-class merit from the People's Government of Shenzhen Municipality.



Social Positions:

- Chairman of the Internet Technology Branch of the Chinese Anti-Tuberculosis Association, Executive Vice Chairman of the Grassroots Tuberculosis Infection Control Committee of the Chinese Anti-Tuberculosis Association Vice President of the Beijing Innovation Alliance on Tuberculosis Diagnosis and Treatment, Vice Chairman of the Guangdong Provincial Antituberculosis Association, Vice Chairman of the Guangdong Provincial Leprosy Prevention and Treatment Association, Chairman of the Tuberculosis Branch of the Shenzhen Medical Association Member of the Tuberculosis Branch of the Chinese Medical Association, Executive Director of Shenzhen Medical Doctor Association, Executive Director of Shenzhen Medical Association, Deputy editor-in-chief of the Electronic Journal of Emerging Infectious Disease.



**Pu-Xuan Lu** is a professor and graduate supervisor of Guangdong Medical University and director of Department of Radiology, Shenzhen Center for Chronic Disease Control.

His academic titles include:

- Chief editor of Electronic Journal of Emerging Infectious Disease.
- Deputy chair, Radiology of Infectious Disease group at radiology branch of Chinese Medical Society.
- Deputy chair, Radiology of Infectious Disease group at Chinese Radiology Society.
- Deputy chair, Radiology branch of Chinese Sexually Transmitted Disease and HIV/AIDS Society.
- Deputy chair, Beijing Diagnostic Imaging Technology Innovation Alliance.
- Deputy chair, Radiology branch of Provincial Health Management Society of Guangdong, China.
- Editorial Committee Member, Journal of Radiology of Infectious Disease.

His research fields include:

- Diagnostic imaging and differential diagnosis of emerging infectious diseases, such as SARS, MERS, AIDS, human-infected avian influenza, tuberculosis, hepatitis, and other infectious diseases as well as clinical and basic sciences of emerging infectious diseases.
- Professor Lu has edited or co-edited more than ten academic treatises. *Diagnostic Imaging of Emerging Infectious Diseases* has been published by Springer in Nov 2015, which obtained national key award for book output in May 2017 by the General Administration of News and Publishing, China. In the recent 5 years, Professor Lu has directed and finished 5 national and provincial as well as international

collaborative research projects. He has published more than 150 research papers, including SCI indexed 43 research papers. And he received 12 awards from Chinese Medical Society, Chinese Preventive Medicine Society, Guangdong provincial government, and Shenzhen city government.



**Wei-guo Tan, MD** is a chief physician graduated from Sun Yat-sen University of Medical Science and Beijing Tuberculosis and Pulmonary Tumor Research Center. Presently, he is the Vice president of Pulmonary Disease Control Institute in Shenzhen Center for Chronic Disease Control and Secretary general of frontline tuberculosis control committee of Anti-Tuberculosis Association of China. He has more than 20 years of experiences in tuberculosis diagnosis, treatment, and prevention; he is in charge of more than 10 scientific research projects and has published plenty of high rank scientific papers.