

Book Review

India's Healthcare Industry: Innovation in delivery, financing, and manufacturing

Lawton Robert Burns (Ed.)

Cambridge University Press, 2014. Hardcover, 610 pages, \$125.00. ISBN 978-1107044371

Journal of Commercial Biotechnology (2014) 20(3), 60–61. doi: 10.5912/jcb661

INDIA'S HEALTHCARE INDUSTRY seeks to synthesize broad elements of India's healthcare sector to provide a system-wide perspective to stakeholders on a range of issues that may fall outside the borders of individual circumscribed areas of interest. This book also tries to address two related issues (1) how India may meet rising demands and heightened consumer expectations for healthcare in line with increasing economic growth and (2) how India's domestic companies are faring in competition with multinationals. The title of this book suggests a comprehensive review of innovative developments in India's Healthcare sector and this weighty volume — 580 pages including endnotes and index — does not disappoint. This reviewer found the book to be quite a good read, in addition to being very helpful to gain a system-wide perspective on the present system and ongoing challenges.

The book consists of chapters contributed by healthcare industry experts, with an impressive number of chapters written by the editor Lawton Robert Burns who displays an encyclopedic understanding of India's sprawling healthcare industry. The book is well organized and the division of Sections and related Chapters provide a good roadmap for readers with a particular interest:

- Section I provides an introduction and overview on India's Healthcare System together with suggested innovative responses to urgent challenges and an overview of the value chain;
- Section II focuses on Providers — physicians, hospitals, medical tourism, and a case studies on the Aravind Eye Care System, the L.V. Prasad Eye Institute, and Vaatslya Healthcare as a model for rural healthcare delivery;

- Section III focuses on healthcare financing and related Private Equity opportunities in India; and,
- Section IV addresses different manufacturing sectors — pharmaceuticals, biotechnology, and medical devices and offers an essay on balancing access and innovation in developing countries (for the most part not specific to India).

Organizationally, end-notes are provided following each chapter and a separate List of Figures, following the Table of Contents, provides additional navigational support for the reader. Overall, Burns and other contributing authors tell a compelling story and make effective use of tables so that the empirical data does not overwhelm or exhaust the reader. Here too, the diagrams and tables are well-placed to illustrate India's relative strengths and immediate challenges.

The strength of this book lies in its development as part of a Wharton School of Business course entitled: "Innovation in the Indian Healthcare Industry," where the course content was developed by Wharton faculty and students in collaboration with the Indian industry experts. The resulting materials have been edited and published now as an encyclopedia of the Indian healthcare sector. Some areas are covered in greater detail than others, though. Background and current challenges relating to education, training and staffing of physicians and organization of India's hospital sector are provided in great detail, as is the issue of Medical Tourism.

Other areas appear to have been given less comprehensive analysis. With regard to the pharmaceutical sector, for example, the book provides little more than an overview on leading players and historical events, and does not attempt to address India's challenges to implement the World Trade Organization (WTO) Agreement on Trade Related Intellectual Property Rights and to

balance the interests of domestic manufacturers, multinational companies, and patients. Given the economic, social and political importance of the Indian pharmaceutical sector, this is surprising. Over the last 18 months in particular, we have seen an increasingly impact of India's industrial policy relating to patents for pharmaceutical products on American and European companies, becoming a trade irritant and affecting India's bio-pharma investment climate. In the biotechnology chapter, scant attention is given to the important issue of access to early capital for funding of innovation intensive life science enterprises, a priority issue for the Department of Biotechnology within the Ministry of Science and Technology. Although these gaps are disappointing, they are perhaps to be expected in a book that provides a comprehensive survey of the healthcare landscape in India — a Goliath task in itself.

More troubling is the absence of a chapter focused on India's *Ayurveda*, *Yoga & Naturopathy*, *Unani*, *Siddha* and *Homoeopathy (AYUSH)* systems of traditional medicine that require improved documentation and standardization to meet ongoing challenges for India's rural populations that remain out of the reach of allopathic healthcare resources and reliant on poorly regulated AYUSH systems. China has demonstrated that standardization and quality control can promote successful and effective traditional medicine services and products domestically and for export.

One other important gap is the absence of discussion of India's ongoing regulatory challenges relating to both Good Manufacturing Practices (GMP) and Good Clinical Practices (GCP). Persistent GMP issues are affecting India's leading pharmaceutical

manufacturers access to the important US generics market — most recently in the case of Ranbaxy this has been a major driver of the proposed merger with Sun Pharma. Similarly, GCP issues have derailed India's formerly thriving clinical research sector over the past year, where Indian and foreign pharmaceutical companies alike have colluded with regulators and academic institutions to game the system. While recognizing the general regulator weaknesses in the national and state-based healthcare regulatory system, the absence of an in-depth discussion of India's regulatory challenges relating to manufacturing, clinical research and drug approval is a significant weakness in the book that should be addressed in a future edition.

More broadly, in addition to providing an accurate overview of the disparate elements of India's healthcare sector, the editor/author Lawton Robert Burns, identifies islands of excellence and areas where innovative solutions may be applied to mitigate ongoing healthcare challenges in Section I of the book. These discussions add value to the book, as do the three case studies provided in Section II, relating to successful low-cost models for healthcare delivery. India's Healthcare Industry is a very useful reference text for anyone seeking a general system-wide understanding of the Indian healthcare sector, with particular focus on the issues of physician education, training and staffing, the hospital sector and medical tourism.

Susan Finston
Finston Consulting LLC
Washington, DC, USA
susan@finstonconsulting.com