

Contents

Part I Key Concepts, Tools and Techniques

1 Lean Principles for Healthcare.....	3
Nilmini Wickramasinghe	
2 Artificial Neural Network Excellence to Facilitate Lean Thinking Adoption in Healthcare Contexts	13
Fatemeh Hoda Moghimi and Nilmini Wickramasinghe	
3 The Suitability of Artificial Neural Networks in Service Quality Control and Forecasting	29
Mohammad Rezazadeh Niavarani and Nilmini Wickramasinghe	
4 The Application of Lean in the Healthcare Sector: Theory and Practical Examples.....	43
Nathan Houchens and Christopher S. Kim	
5 Business Value of IT in Healthcare.....	55
Peter Haddad, Mark Gregory, and Nilmini Wickramasinghe	
6 Initiatives of Service-Oriented Architecture Towards Performance Improvement in Healthcare	83
Fatemeh Hoda Moghimi and Nilmini Wickramasinghe	
7 Adapted Lean Thinking for Emergency Departments: Information Quality Perspective	97
Latif Al-Hakim	

Part II Applications of Lean Thinking Around the Healthcare World

8 Adapted Lean Thinking for Healthcare Services: An Empirical Study in the Traditional Chinese Hospital	115
Ying Su, Jeffrey Soar, Ningqiao Shen, and Latif Al-Hakim	

9	Lean Thinking in Dementia Care Through Smart Assistive Technology: An Evaluation	143
	Trudy Yuginovich and Jeffrey Soar	
10	A Delphi Study on Developing a Conceptual Framework to Understand the Perception of Iranian Physicians Towards Electronic Health Records.....	169
	Seyed Mohammad Seyedi Alavi and Khin Than Win	
11	Trying to Streamline Healthcare Delivery in Australia via the Personally Controlled Electronic Health Record (PCEHR).....	187
	Imran Muhammad, Say Yen Teoh, and Nilmini Wickramasinghe	
12	Identifying Critical Issues for Developing Successful e-Health Solutions	207
	Manuel Zwicker, Juergen Seitz, and Nilmini Wickramasinghe	
13	Applying the Principles of KM to Effect Streamlined Healthcare Operations: A Malaysian Case Study	225
	Sou Wei Wong and Nilmini Wickramasinghe	
14	Remaking Rosa Medical Center: A 5-Step Approach to Transitioning with Lean.....	239
	Mohamed Abouzahra and Joseph Tan	
15	Lean Thinking and Customer Focus: Patient Centered Perspectives on Hospital Quality	265
	Anke Simon and Nilmini Wickramasinghe	
Part III Macro Issues		
16	Applying a System of Systems Approach to Healthcare	287
	Suresh Chalasani and Nilmini Wickramasinghe	
17	The Role for a Healthcare System of Systems Approach Coupled with Collaborative Technologies to Provide Superior Healthcare Delivery	299
	Nilmini Wickramasinghe, Suresh Chalasani, and Sridevi Koritala	
18	The Role of a Disruptive Pervasive Technology Solution to Facilitate Better Healthcare Delivery to Native American Patients.....	315
	Suresh Chalasani, Steve Goldberg, and Nilmini Wickramasinghe	
19	Designing Enabling Regulatory Frameworks to Facilitate the Diffusion of Wireless Technology Solutions in Healthcare	331
	Indrit Troshani, Steve Goldberg, and Nilmini Wickramasinghe	

20	Improving Healthcare Service Quality and Patients' Life Quality Through Mobile Technologies: The Case of Diabetes Self-management	345
	Sally Rao Hill, Indrit Troshani, Steve Goldberg, and Nilmini Wickramasinghe	
21	The Role of Online Social Networks in Consumer Health Informatics: An Example of the Implicit Incorporation of Lean Principles	361
	Carolin Durst, Janine Viol, and Nilmini Wickramasinghe	
22	Supporting Preventive Healthcare with Persuasive Services	381
	Andreas Hamper and Tino Müller	
23	Using Technology Solutions to Streamline Healthcare Processes for Nursing: The Case of an Intelligent Operational Planning Support Tool (IOPST) Solution	405
	Nilmini Wickramasinghe, Bridie Kent, Fatemeh Hoda Moghimi, Malte Stien, Lemai Nguyen, Bernice Redley, Nyree Taylor, and Mari Botti	
24	Using an e-Health Strategy to Facilitate the Design and Development of Effective Healthcare Processes	431
	Raphael Di Francesco and Nilmini Wickramasinghe	

Part IV Micro Issues

25	Value Stream Mapping in Lean Healthcare: A Brief Introduction and Application	463
	Michael S. Dohan, Ted Xenodemetropoulos, and Joseph Tan	
26	Using Value Stream Mapping to Improve Processes in a Urology Department	479
	Chris Gonzalez, Kwok Hung Lau, and Nilmini Wickramasinghe	
27	A Technology-Mediated Solution to Reduce Healthcare Disparities	495
	Nilmini Wickramasinghe, Ray Arias, and Chris Gonzalez	

Part V Case Studies

28	Process Models, Its Inefficiencies and Recommendations of the Emergency Department of the Marienhospital	513
	Lara Henzler, Daniel Mengele, Tahnee Platz, Kristina Riemann, and Janine Steffen	

29	Simulation Study: Clinical Center Esslingen—Process Analysis in the Emergency Department	529
	Corinna Klink, Daniel Denkert, Mario Vargheamidis, Nils Kern, and Tobias Lörch	
30	Emergency Department Katharinenhospital Stuttgart	551
	Melanie Bathelt, Sabrina Hamm, Ayse Cakmak, Stefanie Guder, and Steffen Ebach	
31	Business Process Modeling and Measuring Waiting Times in a German ED: An Approach for Identifying Improvements	603
	Mirjam Bathelt, Emanuel Grabler, Jan Lipka, and Tobias Reutemann	
	Epilogue	631
	Index	633

Lean Thinking for Healthcare

Wickramasinghe, N.; Al-Hakim, L.; Gonzalez, C.; Tan, J.
(Eds.)

2014, XXXII, 645 p. 178 illus., Hardcover

ISBN: 978-1-4614-8035-8