1.1 Introduction

The seven chapters in this section all serve to highlight key concepts, tools and techniques that are relevant and necessary to effect lean thinking for healthcare.

Chapter 1 “Lean Principles for Healthcare” by Wickramasinghe serves to introduce the key principles of lean thinking and related concepts and techniques that are relevant and thus should be incorporated into healthcare design and reform.

Chapter 2 “Artificial Neural Network Excellence to Facilitate Lean Thinking Adoption in Healthcare Contexts” by Moghimi and Wickramasinghe explores the benefits of applying Artificial Neural Network (ANN) techniques to help to identify lost values and facilitate lean thinking adoption in healthcare contexts.

Chapter 3 “The Suitability of Artificial Neural Networks in Service Quality Control and Forecasting” by Nirvani and Wickramasinghe further explores aspects of ANN from the perspective of service quality in healthcare contexts.


Chapter 5 “Business Value of IT in Health Care” by Haddad et al. examines the important aspect of business value and how lean thinking principles can enhance value creation for healthcare.

Chapter 6 “Initiatives in Service Orientated Architecture towards Performance Improvement in Healthcare” by Moghimi and Wickramasinghe looks at key IT technical considerations that can support the application of lean principles for healthcare contexts.

Finally, Chap. 7 by Al-Harkim “Adapted Lean Thinking for Emergency Departments: Information Quality Perspective” examines the benefits of lean in effecting information quality perspectives.

Taken together these chapters help to set the stage for the need for the application of lean principles in healthcare as well as to identify the key tools, techniques and technologies that can facilitate healthcare organisations to embrace and develop appropriate lean strategies and thereby effect superior healthcare operations.