1.1 Introduction

In recognition of the fact that healthcare operations span macro and micro aspects, the next two sections focus respectively on important macro and micro aspects within healthcare delivery where principles of lean thinking can be applied to greatly enhance current operations and practice. Specifically, the chapters that make up this section focus on various lean thinking applications in healthcare from a macro perspective. Important aspects of system of systems thinking and network centric operations are also introduced to facilitate a better understanding and appreciation of various macro level aspects.

Chapter 16 “Applying a System of Systems” by Wickramasinghe and Chalasani introduces the concept of system of systems thinking to healthcare.

Chapter 17 “The Role for a Healthcare System of Systems Approach Coupled with Collaborative Technologies to Provide Superior Healthcare Delivery” by Wickramasinghe et al. illustrates the issues of a system of systems perspective using the context of collaborative technologies to facilitate healthcare delivery for AI/AN populations.

Chapter 18 “The Role of a Disruptive Pervasive Technology Solution to Facilitate Better Healthcare Delivery to Native American Patients” by Chalasani et al. further examines the context of Native American patients and the benefits of pervasive technology solutions in this context.


Chapter 20 “Designing Enabling Regulatory Frameworks to Facilitate the Diffusion of Wireless Technology Solutions in Healthcare” by Troshani et al. examines the need to address healthcare regulatory frameworks in order to facilitate appropriate delivery of care and service.
Chapter 21 “The Role of Online Social Networks in Consumer Health Informatics: An Example of the Implicit Incorporation of Lean Principles” by Durst et al. provides an introduction into the role for on-line social networks to facilitate and promote healthy behaviours.

Chapter 22 “Supporting preventative healthcare with persuasive services” by Hamper and Mueller focuses on the benefits of supporting preventative healthcare and the technologies that might assist in this.

Chapter 23 “Using Technology Solutions to Streamline Healthcare Processes for Nursing: The Case of an Intelligent Operational Planning Support Tool (IOPST) Solution” by Wickramasinghe et al. provides an in depth discussion of nursing care and the importance of lean thinking principles and technology solutions to support care in this complex and often chaotic healthcare domain.

Chapter 24 “Using an e-health strategy to facilitate the design and development of effective healthcare processes” by Di Francesco and Wickramasinghe evaluates the benefits of developing an appropriate e-health strategy.

As can be seen, the chapters that make up this section cover a range of topics all of which have significance and importance to healthcare delivery today. More importantly, they serve to highlight key areas where the principles of lean thinking can effect better operations and enable value driven healthcare to ensue.