

Preface

Over the last 100 years, quality of life and human longevity have improved in most of the industrialized world as a result of advances in human health. We have benefited from reduced exposure to disease (through such measures as vaccinations and improved water quality), and developed treatments that reduce the consequences of disease once exposed. Nevertheless, humans continue to suffer because they do not have access to appropriate healthcare, or because healthcare is delivered in a manner that is confusing or inefficient. The gap between the science and the practice of healthcare is large.

This book is dedicated to improving healthcare through reducing the delays experienced by patients. One aspect of this goal is to improve the flow of patients, so that they do not experience unnecessary waits as they flow through a healthcare system. Another aspect is ensuring that services are closely synchronized with patterns of patient demand. Still another aspect is ensuring that ancillary services, such as housekeeping and transportation, are fully coordinate with direct patient care. Past experience shows that effective management of healthcare delays can produce dramatic improvements in medical outcomes, patient satisfaction, and access to service, while also reducing the cost of healthcare.

Within the 15 chapters of this book, readers will be exposed to a set of techniques and strategies that can be used by clinicians and administrators to substantially reduce delays in healthcare delivery. This is the first book to have reduction in patient delay as its sole focus, and this book provides the foundation by which hospitals can implement change. Reflecting the highly interdisciplinary nature of this book, the chapters have been written by doctors, nurses, industrial engineers, system engineers and geographers.

These perspectives provide the comprehensive view needed to address the problem of patient delay.

The book begins in Chapters 1 to 4 by examining healthcare as an integrated system. Chapters 1 and 2 provide hands-on methods for developing process models, using these models to identify and remove bottlenecks, and developing facility plans. Chapter 3 examines medical outcomes that result from waits for surgeries. Chapter 4 presents a set of breakthrough strategies that use real-time monitoring systems for continuous improvement.

Chapters 5 to 11 present techniques and methods that can be immediately implemented to improve healthcare operations. Chapter 5 focuses on the patient appointment system, particularly through the approach of advanced access, which makes appointments more immediately available to patients. Chapter 6 concentrates on management of waiting lists for surgeries and the allocation of available capacity to meet patient demands. Chapter 7 offers techniques for scheduling staff to match patterns in patient demand, and thus reducing predictable delays. The literature on simulation modeling, which is widely used for both healthcare design and process improvement, is surveyed in Chapter 8. Chapter 9 provides methods for forecasting demand for healthcare on a region-wide basis. Last in this group, Chapter 10 presents queueing theory as a general method for modeling waits in healthcare.

The last section of the book concentrates on achieving change. Chapter 11 focuses on the rapid delivery of medication in the event of a catastrophic event, such as a pandemic or terrorist attack. Chapter 12 provides a diagnostic for assessing the state of a hospital and using the state assessment to select improvement strategies. Chapter 13 demonstrates the importance of optimizing care as patients transition from one care setting to the next with an emphasis on clinical outcomes and the business case. Chapter 14 shows how to evaluate the overall portfolio of patient diagnostic groups to guide system changes. Lastly, Chapter 15 provides project management tools to guide the execution of patient flow projects.

This book is intended to motivate and guide change so that healthcare systems around the world give more priority to reducing patient delay and implement changes that dramatically improve healthcare. The chapters of this book illustrate that radical changes in the management of patient flow and patient delay are not only possible; they are essential to ensuring that advances in medical practice keep pace with advances in medical science.

Patient Flow: Reducing Delay in Healthcare Delivery

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