



Managing Health Services Organizations and Systems

SIXTH EDITION

BEAUFORT B. LONGEST, JR.
KURT DARR

Managing Health Services Organizations and Systems

SIXTH EDITION

by

Beaufort B. Longest, Jr., Ph.D., FACHE
University of Pittsburgh

Kurt Darr, J.D., Sc.D., FACHE
The George Washington University



Baltimore • London • Sydney



Health Professions Press, Inc.

Post Office Box 10624

Baltimore, Maryland 21285-0624

www.healthpropress.com

Copyright © 2014 by Beaufort B. Longest, Jr., and Kurt Darr.

All rights reserved.

Interior and cover designs by Mindy Dunn.

Typeset by Barton Matheson Willse & Worthington, Baltimore, Maryland.

Manufactured in the United States of America by Versa Press, East Peoria, Illinois.

The information provided in this book is in no way meant to substitute for the advice or opinion of a medical, legal, or other professional expert. This book is sold without warranties of any kind, express or implied, and the publisher and authors disclaim any liability, loss, or damage caused by the contents of this book.

Library of Congress Cataloging-in-Publication Data

Longest, Beaufort B., Jr., author.

Managing health services organizations and systems / by Beaufort B. Longest, Jr., Kurt Darr. — Sixth edition.

p. ; cm.

Includes bibliographical references and index.

ISBN 978-1-938870-00-2 (case) — ISBN 1-938870-00-X (case)

I. Darr, Kurt, author. II. Title.

[DNLM: 1. Health Facility Administration—United States. 2. Hospital Administration—United States. WX 150 AA1]

RA971

362.1068—dc23

2014006399

British Cataloguing in Publication data are available from the British Library.

E-book edition: ISBN 978-1-938870-34-7

Contents

<i>About the Authors</i>	<i>xi</i>
<i>Preface</i>	<i>xiii</i>
<i>About this Edition</i>	<i>xv</i>
<i>Acknowledgments</i>	<i>xvii</i>
<i>Acronyms Used in Text</i>	<i>xix</i>

Part I. The Healthcare Setting

Chapter 1. Healthcare in the United States	3
Health and System Goals	4
Lack of Synchrony	6
Processes That Produce Health Policy	7
A Brief History of Health Services in the United States	11
Other Western Systems	16
Structure of the Health Services System	17
Classification and Types of HSOs	19
Local, State, and Federal Regulation of HSOs/HSs	22
Other Regulators of HSOs/HSs	25
Accreditation in Healthcare	25
Education and Regulation of Health Services Managers	29
Regulation and Education of Selected Health Occupations	33
Associations for Individuals and Organizations	39
Paying for Health Services	41
Government Payment Schemes	46
System Trends	49
Discussion Questions	50
Case Study 1: Gourmand and Food—A Fable	51
Case Study 2: Where's My Organ?	52
Case Study 3: Dental Van Shenanigans	53
Notes	54
Chapter 2. Types and Structures of Health Services Organizations and Systems	65
The Triad of Key Organizational Components	66
Governing Body	68
Chief Executive Officer	72
Professional Staff Organization	73
Organizational Structures of Selected HSOs/HSs	81
Acute Care Hospitals	84
Nursing Facilities	90
Health Systems	93
The Triad in HSs	96
Ambulatory Health Services	102
Hospice	103

Home Health Agencies	107
Managed Care	110
Public Health.	114
Diversification in HSOs and HSs	116
Environmental Pressures to Change Types and Structures of HSOs/HSs	118
Discussion Questions.	119
Case Study 1: The Clinical Staff	120
Case Study 2: The Role of the Healthcare Executive in a Change in Organizational Ownership or Control.	120
Case Study 3: Public Health and the Health Services Delivery System.	122
Case Study 4: Board Effectiveness	123
Notes.	124
 Chapter 3. Healthcare Technology	 131
History and Background	134
Types of Technologies	135
Effects of Technology on Health Status	138
Forces Affecting Development and Diffusion of Technology	139
Responses to Diffusion and Use of Technology	144
HSO/HS Technology Decision Making.	150
Managing Biomedical Equipment in HSOs/HSs.	154
Health Information Technology.	158
Telemedicine	165
Future Developments	166
Technology and the Future of Medicine.	167
Discussion Questions.	168
Case Study 1: The Feasibility of BEAM.	169
Case Study 2: “Who Does What?”	170
Case Study 3: “Let’s ‘Do’ a Joint Venture”	171
Case Study 4: Worst Case Scenario—the Nightmare	172
Notes.	172
 Chapter 4. Ethical and Legal Environment	 183
Society and the Law.	184
Relationship of Law to Ethics	185
Ethics Framework	185
Personal Ethic and Professional Codes	191
Health Services Codes of Ethics.	192
Ethical Issues Affecting Governance and Management.	194
Biomedical Ethical Issues.	198
End-of-Life Decisions	200
Organizational Responses to Ethical Problems.	211
Managers and the Law.	218
Torts and HSOs/HSs.	223
Reforms of the Malpractice System	225
Selected Legal Areas Affecting HSOs/HSs	226
Legal Process of a Civil Lawsuit	230
Special Considerations for the Manager.	232
Discussion Questions.	234

Case Study 1: “What’s a Manager to Do?”	235
Case Study 2: Bits and Pieces	236
Case Study 3: Understanding	237
Case Study 4: Allocation	238
Notes	238

Part II. Managing Health Services Organizations and Systems

Chapter 5. The Practice of Management in Health Services Organizations and Systems	251
The Work of Managers	252
Key Definitions	252
Management and Organizational Culture, Philosophy, and Performance	255
Management Functions, Skills, Roles, and Competencies	258
A Management Model for HSOs/HSs	278
Discussion Questions	283
Case Study 1: The CEO’s Day	283
Case Study 2: Today’s Workforce	286
Case Study 3: Healthcare Executives’ Responsibility to Their Communities	287
Case Study 4: The Business Office	288
Case Study 5: Very Brief History of Management Theories	289
Notes	289
Chapter 6. Managerial Problem Solving and Decision Making	293
Problem Analysis and Decision Making	294
Problem Solving	295
Process and Model	297
Influencing Problem Solving and Decision Making	308
Unilateral and Group Problem Solving	312
Problem-Solving and Decision-Making Styles	314
Discussion Questions	318
Case Study 1: The Nursing Assistant	318
Case Study 2: The New Charge Nurse	319
Case Study 3: Listening	320
Case Study 4: Ping-Pong	320
Notes	321
Chapter 7. The Quality Imperative: The Theory	325
Improving Quality and Performance	326
Taking A CQI Approach	332
CQI, Productivity Improvement, and Competitive Position	337
Theory of CQI	338
Strategic Quality Planning: Hoshin Planning	349
Organizing for Improvement	354
The Next Iteration of CQI—A Community Focus	356
Discussion Questions	357
Case Study 1: Fed Up in Dallas	357
Case Study 2: Clinics	358
Case Study 3: Where and How to Start?	359
Case Study 4: Extent of Obligation	360
Case Study 5: Surgical Safety—Retained Foreign Objects	361
Notes	361

Chapter 8. The Quality Imperative: Implementation	367
Undertaking Process Improvement	368
Other Improvement Methodologies	370
Barriers and Facilitators to Improvement	375
Improvement and Problem Solving	376
Statistical Process Control	377
Tools for Improvement	378
Productivity and Productivity Improvement	385
Physicians and CQI	390
Patient and Worker Safety in Healthcare	394
Quality Improvement Structures/Processes Useful in Patient/Worker Safety	398
Overlapping Safety Issues for Patients and Workers	400
Discussion Questions	407
Case Study 1: The Carbondale Clinic	408
Case Study 2: Noninvasive Cardiovascular Laboratory	409
Case Study 3: Infections—C. difficile (CDI)	410
Case Study 4: Infections—CLABSI	411
Case Study 5: Infections—Flu Vaccination	411
Case Study 6: Sharps Injuries	412
Case Study 7: Slips, Trips, and Falls	412
Case Study 8: Safe Patient Handling and Patient Movement Injuries	413
Case Study 9: Hazardous Materials	413
Case Study 10: Violence in the Workplace	414
Notes	414
Chapter 9. Strategizing	421
Strategizing and Systems Theory	422
Strategizing and Planning	424
The Strategizing Process	434
Situational Analysis	434
External Environmental Analysis	435
Internal Environmental Analysis	440
Strategy Formulation	441
Strategic Implementation	449
Strategic Control	450
Strategic Issues Management	454
Discussion Questions	455
Case Study 1: No Time for Strategizing	455
Case Study 2: A Response to Change	456
Case Study 3: HSO Strategic Assessment	457
Case Study 4: Closing Pediatrics	457
Case Study 5: Affiliation	458
Case Study 6: Healthcare Firms Send Jobs Overseas	458
Notes	459
Chapter 10. Marketing	463
Marketing Defined	464
Strategic Marketing Management and Analysis	467
The Marketing Mix: Core Concepts in Marketing Management	468

Challenges in Identifying the Customer and Target Markets	471
Examples of Marketing Strategies	474
Industry Structure and Competitive Position: Porter's Model.	477
Market Position Analysis	481
Strategic Marketing Postures	483
Market Research	484
Ethics in Marketing.	485
Discussion Questions.	486
Case Study 1: Lactation Services at Women's Wellness Hospital.	487
Case Study 2: What Is Marketing?.	488
Case Study 3: Image Management and Branding at the Disability Services Organization of Rivertown	489
Case Study 4: Hospital Marketing Effectiveness Rating Instrument.	490
Case Study 5: Nontraditional Marketing.	493
Notes.	494
 Chapter 11. Controlling and Allocating Resources	 497
Monitoring (Control) and Intervention Points	498
Control Model.	500
Levels of Control.	501
Control and CQI.	502
Control and Problem Solving	502
Control Considerations	502
Information Systems and Control	504
Control and Human Resources	508
Staffing Activities.	510
RM and Quality Improvement	520
Healthcare and Public Health Emergency Preparedness.	527
Control Methods.	535
Use of Analytical Techniques in Resource Allocation	548
Project Management	558
Specific Construction Application	569
Discussion Questions.	572
Case Study 1: Admitting Department	573
Case Study 2: Centralized Photocopying.	574
Case Study 3: Barriers to an Effective QI Effort.	575
Case Study 4: State Allocation Decisions—Centralize or Decentralize.	576
Case Study 5: Financial Ratios.	577
Case Study 6: Healthcare Emergency Preparedness	579
Case Study 7: Placing Imaging Services to Support ED Operations.	580
Notes.	580
 Chapter 12. Designing	 587
The Ubiquity of Designing	588
Formal and Informal Aspects of Organization Design	589
Classical Design Concepts in Building Organization Structures.	590
Designing Interorganizational Relationships	606
An Integrative Perspective on Organization Design	613
Discussion Questions.	617

Case Study 1: Is the Matrix the Problem or the Solution?	618
Case Study 2: Trouble in the Copy Center.	619
Case Study 3: "I Cannot Do It All!"	619
Case Study 4: Somebody Has to Be Let Go	620
Case Study 5: Is Outsourcing Part of Designing?	621
Notes	622
Chapter 13. Leading	627
Leading Defined and Modeled.	629
Ethical Responsibilities of Leaders	630
Power and Influence in Leading.	632
Motivation Defined and Modeled	635
Conclusions About the Roles of Power and Influence and of Motivation in Leading.	646
Approaches to Understanding Leadership	647
Toward an Integrative Approach to Effective Leading	661
Discussion Questions.	663
Case Study 1: Leadership in the West Wing.	664
Case Study 2: Charlotte Cook's Problem	664
Case Study 3: The Presidential Search	665
Case Study 4: The Young Associate's Dilemma	666
Case Study 5: The Holdback Pool	666
Case Study 6: Ethical Aspects of Leadership.	667
Notes	668
Chapter 14. Communicating	673
Communicating Is Key to Effective Stakeholder Relations.	674
Communication Process Model.	675
Barriers to Effective Communication.	678
Flows of Intraorganizational Communication	682
Communicating with External Stakeholders	686
Special Situations of Communicating with External Stakeholders	688
Discussion Questions.	694
Case Study 1: Apple Orchard Assisted Living	694
Case Study 2: Information Technologies in Rural Florida Hospitals.	695
Case Study 3: "You Didn't Tell Me!"	696
Case Study 4: How Much Should We Say?	696
Case Study 5: Getting Help When Needed	697
Notes	697
<i>Index</i>	<i>699</i>

About the Authors

Beaufort B. Longest, Jr., Ph.D., FACHE, M. Allen Pond Professor of Health Policy & Management in the Graduate School of Public Health at the University of Pittsburgh and Founding Director of the University's Health Policy Institute, an organization he led from 1980–2011.

Professor Longest is a fellow of the American College of Healthcare Executives and a member of the Academy of Management, AcademyHealth, and American Public Health Association. With a doctorate from Georgia State University, he served on the faculty of Northwestern University's Kellogg School of Management before joining the University of Pittsburgh's Public Health faculty in 1980. He is an elected member of the Beta Gamma Sigma Honor Society in Business as well as in the Delta Omega Honor Society in Public Health.

His research on modeling managerial competence, issues of governance in healthcare organizations, and related issues of health policy and management has appeared in numerous peer-reviewed journals and he is author or co-author of 11 books and 32 chapters in other books. His book, *Health Policymaking in the United States*, now in its fifth edition, is among the most widely used textbooks in graduate health policy and management programs. His newest book is *Managing Health Programs: From Development Through Evaluation* (2014).

Professor Longest has consulted with healthcare organizations and systems, universities, associations, and government agencies on health policy and management issues and has served on several editorial and organizational boards.

Kurt Darr, J.D., Sc.D., FACHE, Professor, Department of Health Services Management and Leadership, School of Public Health and Health Services, The George Washington University, Washington, DC 20052

Dr. Darr is Professor of Health Services Administration in the Department of Health Services Management and Leadership at The George Washington University. He holds the Doctor of Science from The Johns Hopkins University and the Master of Hospital Administration and Juris Doctor from the University of Minnesota.

Professor Darr completed his administrative residency at Rochester (Minnesota) Methodist Hospital and subsequently worked as an administrative associate at the Mayo Clinic. After being commissioned in the U.S. Navy, he served in administrative and educational assignments at St. Albans Naval Hospital and Bethesda Naval Hospital. He completed postdoctoral fellowships with the Department of Health and Human Services, the World Health Organization, and the Accrediting Commission on Education for Health Services Administration.

Professor Darr is a Fellow of the American College of Healthcare Executives, a member of the District of Columbia and Minnesota Bars, and served for 20 years as a mediator in the Superior Court of the District of Columbia. He serves or has served on commissions and committees for various professional organizations, including The Joint Commission on Accreditation of Healthcare Organizations, the American College of Healthcare Executives, and the Commission on Accreditation of Healthcare Management Education. He is a voluntary consultant on quality improvement and ethics to hospitals in the District of Columbia metropolitan area.

Professor Darr regularly presents seminars on health services ethics, hospital organization and management, quality improvement, and application of the Deming method in health services delivery. He is the author and editor of numerous books and articles in the health services field.

Preface

Leading health services organizations (HSOs) and health systems (HSs) are setting the benchmarks and establishing the best practice standards for others to emulate. They are simultaneously satisfying their customers, achieving quality and safety goals, and meeting cost objectives. The benchmarks of excellence in health services delivery are being established in HSOs and HSs that have excellent managers, as well as talented clinicians and dedicated governing bodies.

Our purpose in this 6th edition, as in previous editions, is to present information and insight that can set the benchmarks of excellence in the management of health services delivery. The book will be useful to two groups. It will assist students as they prepare for health services management careers through programs of formal study. In addition, it has broad use in providing knowledge of applied management theory that is part of professional development for practicing health services executives. We hope both groups will find the book a useful reference in their professional libraries.

As in previous editions, the main focus is managing HSOs and HSs. This edition gives significant attention to managing the increasingly important system of public health organizations and services. Hospitals and long-term care organizations continue to be prominent HSOs and are treated as such here. Ambulatory care organizations, home health agencies, and managed care organizations, among other HSOs, are also covered. Whether HSOs operate as independent entities or align themselves into various types of HSs, all face dynamic external environments—a mosaic of external forces that includes new regulations and technologies; changing demographic patterns; increased competition; public scrutiny; heightened consumer expectations; greater demands for accountability; and major constraints on resources. The interface between HSOs and HSs and their external environments is given added attention in this edition.

The 6th edition includes over 30 new case studies and updated coverage of healthcare services issues and practices—including financial management. In addition, there are new sections on emergency preparedness, patient and staff safety, infection control, employee stress, hazardous materials, workplace violence, and applying project management in health services.

As in previous editions, we present management theory so as to demonstrate its applicability to all types of HSOs and HSs. This objective is accomplished by using a process orientation that focuses on how managers manage. We examine management functions, concepts, and principles as well as managerial roles, skills, and competencies within the context of HSOs and HSs and their external environments. For nascent managers, the book introduces and applies terms of art, provides an updated list of acronyms, and explains concepts that will be a foundation for lifelong learning and professional development.

Experienced managers will find reinforcement of existing skills and experience, provision and application of new theory, and application of traditional theory and concepts in new ways. Managing in the unique environment that is health services delivery requires attention to the managerial tools and techniques that are most useful. The fourteen chapters in this 6th edition of *Managing Health Services Organizations and Systems* are an integrated whole that covers how management is practiced in HSOs and HSs. The discussion questions and cases will stimulate thought and dialogue of chapter content. It is our hope that the book will assist all who aspire to establish the benchmarks of excellence in the extraordinarily complex and essential economic sector that is the health services field.

About this Edition

Part I describes the setting in which health services (HSs) are delivered. Chapter 1, “Healthcare in the United States,” develops a framework of the important public and private entities that are the grounding for delivery of health services. Discussed are regulators, educators, and accreditors, as well as sources of financing for services.

The book’s second chapter, “Types and Structures of Health Services Organizations and Health Systems,” provides a generic discussion of governance, management, and professional staff organization found in health services organizations (HSOs). This triad is applied to selected HSOs that are archetypal of those in the health services field. Each type is discussed briefly.

Technology has a central role in delivery of health services. Chapter 3, “Healthcare Technology,” describes the history, effects, and diffusion of technology and the decisions made by HSOs in acquiring and managing technology in the workplace.

Chapter 4, “Ethical and Legal Environment,” establishes the pervasive influence and effects of ethics and law in the health services field. Ethical frameworks are discussed, ethical issues are identified, and HSO responses to them are suggested. Law is the minimum level of performance in managing health services. The relationship between the law and the work of managers is also identified.

Part II builds on the previous chapters by focusing on the process of managing in HSOs/HSs. In Chapter 5, “The Practice of Management in Health Services Organizations and Health Systems,” *management* is defined and a comprehensive model of the management process in HSOs/HSs is presented. This model provides a framework for understanding what managers actually do. The management process is considered from four perspectives: the functions managers perform, the skills they use in carrying out these functions, the roles managers fulfill in managing, and the set of management competencies that are needed to do the work well. These perspectives form a mosaic—a more complete picture than any one perspective—of management work

“Managerial Problem Solving and Decision Making,” is discussed in Chapter 6. The pervasive decision-making function is examined, particularly as it relates to solving problems. Application of a problem-solving model is a major focus of the chapter.

Chapter 7, “The Quality Imperative: The Theory,” describes and analyzes the development of the theoretical underpinnings of quality and performance improvement.

Chapter 8, “The Quality Imperative: Implementation,” focuses on how HSOs make continuous improvement of quality and productivity a reality. The emphasis is process improvement, which leads to improved quality and enhanced productivity. Organizing for quality improvement requires a commitment from governance, management, and physicians, as well as the involvement of staff throughout the HSO in applying the methods and tools described.

Chapter 9, “Strategizing,” details how managers determine the opportunities and threats emanating from the external environments of their organizations and systems and how they respond to them effectively.

Chapter 10, “Marketing,” details how managers understand and relate to the markets they serve.

Chapter 11, “Controlling and Allocating Resources” presents a general model of control and focuses on controlling individual and organizational work results through techniques such as management information systems, management and operations auditing, human resources management, and budgeting. Control of medical care quality through risk management and

quality assessment and improvement is discussed. The chapter concludes with applications of quantitative techniques useful in resource allocation, such as volume analysis, capital budgeting, cost–benefit analysis, and simulation.

Chapter 12, “Designing,” provides conceptual background for understanding HSO/HS organizational structures. It contains information on general organization theory, including classical principles and contemporary concepts as they relate to organizations, systems, and alliances of organizations.

Chapter 13, “Leading,” differentiates transactional and transformational leadership and models and defines *leadership*. The extensive literature on leader behavior and situational theories of leadership is reviewed. *Motivation* is defined and modeled. The concept of motivation and its role in effectively leading people and entire HSOs/HSs is also discussed.

Chapter 14, “Communicating,” describes a communication process model and applies it in communicating within organizations and systems and between them and their external stakeholders.

Instructor Resources

Downloadable Course Materials

Attention Instructors! Downloadable materials are available to help you design your course using *Managing Health Services Organizations and Systems, Sixth Edition*.

Please visit **www.healthpropress.com/longest-course-materials** to access the following:

- Customizable PowerPoint presentations for every chapter, totaling more than 350 slides
- Image bank of figures and tables* in PDF format for easy use in your PowerPoint presentations, tests, handouts, and other course purposes
- Summary of chapter learning objectives for use in course syllabus and classroom/online instruction
- Additional discussion questions and case studies for each chapter to extend student learning opportunities
- List of acronyms for quick and easy reference

**Some figures and tables are not included due to permissions constraints.*

Acknowledgments

Professor Longest thanks Carolyn, whose presence in his life continues to make many things possible and doing them seem worthwhile. He extends appreciation to Mark S. Roberts, M.D., Chair of the Department of Health Policy and Management; Donald S. Burke, M.D., Dean of the Graduate School of Public Health; and Arthur S. Levine, M.D., Senior Vice Chancellor for Health Sciences at the University of Pittsburgh, for encouraging and facilitating a work environment that is conducive to the scholarly endeavors of faculty members.

Professor Darr is grateful to Anne for her unstinting support of this latest edition and for never becoming impatient with the sometimes snail-like pace of the work. My department chair, Robert E. Burke, Ph.D., was supportive of my work on this 6th edition, and I am pleased to acknowledge him. A book of this magnitude—even a revision—cannot be researched and written without help. Thanks are owed to my graduate assistants during its writing. Ayla Baughman and Nora Albert worked effectively, often under severe time constraints. Both of these young women have the qualities to succeed in the health services field. I wish them all good things in the future.

The authors wish to thank several people at Health Professions Press for their assistance with this book. Mary Magnus, Director of Publications; Kaitlin Konecke, Marketing Coordinator and Textbook Manager; Erin Geoghegan, Graphic Design Manager; and Carol Peschke and Diane Ersepke, copyeditors; each made important contributions. We are grateful to Cecilia González, Production Manager, for her untiring efforts to make the book as good as it could be. She saw us through the project with good cheer and much assistance. We also thank the publishers and authors who granted permission to reprint material to which they hold the copyright. Finally, and last but not least, we are grateful to users of the 5th edition whose comments and critiques helped us to improve the 6th edition.

The authors acknowledge the contributions made by our coauthor on earlier editions, Jonathon S. Rakich, Ph.D. Professor Rakich collaborated with us on *Managing Health Services Organizations and Systems* for more than three decades. His participation and historic role in setting direction and selecting substance to achieve a high-quality book can be found even in the 6th edition. We thank him.

Acronyms Used in Text

AA	associate of arts (degree)
AAAHC	Accreditation Association for Ambulatory Healthcare
AAHSA	American Association of Homes and Services for the Aging, also known as LeadingAge
AAMC	Association of American Medical Colleges
ABC	activity-based costing
ABMS	American Board of Medical Specialties
ACA	Affordable Care Act of 2010
ACHE	American College of Healthcare Executives
ACO	accountable care organization
ACS	American College of Surgeons
ADL	activities of daily living
ADR	alternative dispute resolution
AHA	American Hospital Association
AHCA	American Health Care Association
AHCPR	Agency for Health Care Policy and Research
AHIP	America's Health Insurance Plans
AHRQ	Agency for Healthcare Research and Quality
AI	artificial intelligence
AIDS	acquired immunodeficiency syndrome
ALOS	average length of stay
AMA	American Medical Association
ANA	American Nurses Association
AND	allow natural death
AOA	American Osteopathic Association
APACHE	acute physiology and chronic health evaluation
APC	ambulatory payment category
APG	ambulatory patient group
ASC	ambulatory surgery centers
ASQ	American Society for Quality
BCG	Boston Consulting Group Matrix
BEAM	brain electrical activity mapping
BIM	building information modeling
BLS	Bureau of Labor Statistics
BSC	balanced scorecard
BSN	bachelor of science in nursing (degree)
CABG	coronary artery bypass grafting
CAD	computer-aided design
CAHME	Commission on Accreditation of Healthcare Management Education
CalRHIO	California Regional Health Information Organization
CAMH	Comprehensive Accreditation Manual for Hospitals
CAS	carotid artery stenting
CAUTI	catheter-associated urinary tract infection

CBO	Congressional Budget Office
CDC	Centers for Disease Control and Prevention
CDI	Clostridium difficile infection
CDSS	clinical decision support system
CEA	carotid endarterectomy
CEO	chief executive officer
CEPH	Council on Education for Public Health
CFO	chief financial officer
CGE	continuing governance education
CHA	Catholic Health Association of the United States
CHAP	Community Health Accreditation Program
CHC	community health center
CHIN	community health information network
CIO	chief information officer
CLABSI	central line–associated bloodstream infection
CMO	chief medical officer
CMS	Centers for Medicare and Medicaid Services
CNA	certified nursing assistant
CNM	certified nurse midwife
CNO	chief nursing officer
CNS	clinical nurse specialist
COE	Center for Outcomes and Evidence
CON	certificate of need
COO	chief operating officer
COP	conditions of participation
CPI	consumer price index
CPM	critical path method
CPR	cardiopulmonary resuscitation
CQI	continuous quality improvement
CQO	chief quality officer
CRM	crew resource management
CRNA	certified registered nurse anesthetist
CSS	clinical support system
CT	computerized tomography
CTO	chief technology officer
CUS	“I am Concerned. I am Uncomfortable. This is a Safety issue.”
CUSP	comprehensive unit safety program
DBS	deep brain stimulation
DHHS	Department of Health and Human Services
DIC	diagnostic imaging centers
DMAIC	Define, measure, analyze, improve, control
DNR	do not resuscitate
DNVHC	Det Norske Veritas Healthcare, Inc.
DO	doctor of osteopathy
DOL	U.S. Department of Labor
DRG	diagnosis-related group
DVA	Department of Veterans Affairs
EAP	employee assistance program
ECHO	echocardiogram

ED	emergency department
EH	employee health
EHR	electronic health record
EMR	electronic medical record
EMS	emergency medical services
EMT	emergency medical technician
EOC	environment of care
EPC	evidence-based practice center
EOP	emergency operations plan
EPM	epidemiological planning model
EVM	earned value management
FAH	Federation of American Hospitals
FC	fixed costs
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FMEA	failure mode effects analysis
fMRI	functional magnetic resonance imaging
FQHC	Federally Qualified Health Centers
FTC	Federal Trade Commission
FTE	full-time equivalent employee
GB	governing body
GDP	gross domestic product
GE	General Electric
GPO	group purchasing organization
HAI	healthcare-associated infection
HCFA	Health Care Financing Administration
HCAHPS	Hospital Consumer Assessment of Healthcare Providers and Systems
HCQIA	Health Care Quality Improvement Act of 1986
HEDIS	Health Plan Employer Data and Information Set
HHA	home health agency
HIPDB	Healthcare Integrity and Protection Data Bank
HIT	health information technology
HIV	human immunodeficiency virus
HME	home medical equipment
HMO	health maintenance organization
HQI	hospital quality improvement
HR	human resources
HRET	Hospital Research and Educational Trust
HRM	human resources management
HS	health system
HSA	health systems agency
HSO	health services organization
HTA	healthcare technology assessment
HVA	hazard vulnerability analysis
ICRC	infant care review committee
ICU	intensive care unit
IDN	integrated delivery network
IDS	integrated delivery system
IEC	institutional ethics committee

IHI	Institute for Healthcare Improvement
IHIE	Indiana Health Information Exchange
IOM	Institute of Medicine
IOR	interorganizational relationship
IPA	independent practice association
IRB	institutional review board
IRS	Internal Revenue Service
IS	information system
ISO	International Organization for Standardization
IT	information technology
IV	intravenous
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
JCC	joint conference committee
KQC	key quality characteristic
KPV	key process variable
LAN	local area network
LCL	lower control limit
LIP	licensed independent practitioner
LLC	limited liability company
LOS	length of stay
LPC	least preferred co-worker
LPN	licensed practical (vocational) nurse
LTC	long-term care
LTCH	long-term care (extended stay) hospital
M&M	morbidity and mortality
MBNQA	Malcolm Baldrige National Quality Award
MBO	management by objectives
MBR	management by results
MCO	managed care organizations
MD	medical doctor
MDSS	management decision support system
MGMA	Medical Group Management Association
MICU	medical intensive care unit
MIS	management information systems
MRI	magnetic resonance imaging
MRSA	Methicillin-resistant <i>Staphylococcus aureus</i>
MSD	musculoskeletal disorder
MSDS	material safety data sheets
MSI	magnetic source imaging
MSO	management services organization
M-TAC	multidisciplinary technology assessment committee
MVS	multi-vendor servicing
NCQA	National Committee for Quality Assurance
NA	nursing assistant
NASA	National Aeronautics and Space Administration
NaSH	National Surveillance System for Healthcare Workers
NCHSRHCTA	National Center for Health Services Research and Health Care Technology Assessment
NCHCT	National Center for Health Care Technology

NCHL	National Center for Healthcare Leadership
NCVL	noninvasive cardiovascular laboratory
NF	nursing facility
NGC	National Guideline Clearinghouse
NHS	National Health Service (U.K.)
NHSN	National Healthcare Safety Network (CDC)
NICU	neonatal intensive care unit
NIH	National Institutes of Health
NIOSH	National Institute for Occupational Safety and Health
NLM	National Library of Medicine
NLN	National League for Nursing
NLNAC	National League for Nursing Accrediting Commission
NP	nurse practitioner
NPSG	National Patient Safety Goals
OBRA	Omnibus Budget Reconciliation Act of 1987
ODS	organized delivery system
OPG	ocular plethysmograph
OR	operating room
OSHA	Occupational Safety and Health Administration
OT	occupational therapy
OTA	Office of Technology Assessment
PA	physician assistant
PAC	political action committee
PAS	physician-assisted suicide
PBT	proton beam therapy
PDCA	plan, do, check, act
PDSA	plan, do, study, act
PERT	program evaluation and review technique
PET	positron emission tomography
PGY	postgraduate year
PHO	physician-hospital organization
PI	productivity improvement
PICU	pediatric intensive care unit
PIT	process improvement team
POS	point of service
PPE	personal protective equipment
PPO	preferred provider organization
PRO	peer review organization
PSDA	Patient Self-Determination Act
PSO	professional staff organization
PSRO	professional standards review organization
PT	physical therapy
PTCA	percutaneous transluminal coronary angioplasty
PVR	pulse volume recording plethysmograph
PVS	persistent vegetative state
QA	quality assurance
Q/PI	quality/productivity improvement
QA/I	quality assessment and improvement
QI	quality improvement

QIC	quality improvement council
QIO	quality improvement organization
QIT	quality improvement team
QMHCD	quality management for health care delivery
QWL	quality-of-work life
RBRVS	resource-based relative value scale
RDE	rule of double effect
RHIO	regional health information organization
RM	risk management
RN	registered nurse
ROI	return on investment
RT	rehabilitation therapy
RUG	resource utilization group
SA	strategic alliance
SBAR	situation, background, assessment, recommendation
SBU	strategic business unit
SCAP	service, consideration, access, and promotion
SD	standard deviation
SEA	sentinel event alert
SHRM	strategic human resources management
SICU	surgical intensive care unit
SNF	skilled nursing facility
SPC	statistical process control
SPECT	single-proton emission computed tomography
SSU	strategic service unit
STEPPS	strategies to enhance performance and patient safety
SWOT	strengths/weaknesses/opportunities/threats
TB	tuberculosis
TC	total costs
TEAM	Technology Evaluation and Acquisition Methods
TEE	transesophageal echocardiography
t-PA	tissue plasminogen activator
TQM	total quality management
UCL	upper control limit
UPMC	University of Pittsburgh Medical Center
UR	utilization review
USPHS	United States Public Health Service
VAP	ventilator-associated pneumonia
VC	variable costs
VNS	vagus nerve stimulation
VP	vice president
VPMA	vice president for medical affairs
WAN	wide-area network