

# RESEARCH AND THEORY TO FOSTER CHANGE IN THE FACE OF GRAND HEALTH CARE CHALLENGES

**Edited by** Jennifer L. Hefner,  
Dori A. Cross and Patrick D. Shay

ADVANCES IN HEALTH CARE  
MANAGEMENT

**VOLUME 22**

RESEARCH AND THEORY TO  
FOSTER CHANGE IN THE FACE OF  
GRAND HEALTH CARE  
CHALLENGES

# ADVANCES IN HEALTH CARE MANAGEMENT

Series Editor: Jennifer Hefner

Associate Editors: Dori A. Cross and Patrick D. Shay

## Recent Volumes:

- Volume 11: *Biennial Review of Health Care Management* – Edited by John D. Blair and Myron D. Fottler, with assistance from Grant T. Savage
- Volume 12: *Health Information Technology in the International Context* – Edited by Nir Menachemi and Sanjay Singh, with assistance from Valerie A. Yeager and Grant T. Savage
- Volume 13: *Annual Review of Health Care Management: Strategy and Policy Perspectives on Reforming Health Systems* – Edited by Leonard H. Friedman, Grant T. Savage and Jim Goes
- Volume 14: *Leading in Health Care Organizations: Improving Safety, Satisfaction and Financial Performance* – Edited by Tony Simons, Hannes Leroy and Grant T. Savage
- Volume 15: *Annual Review of Health Care Management: Revisiting the Evolution of Health Systems Organization* – Edited by Jim Goes, Grant T. Savage and Leonard H. Friedman
- Volume 16: *Population Health Management in Health Care Organizations* – Edited by Jennifer L. Hefner, Timothy R. Huerta and Ann Scheck McAlearney
- Volume 17: *International Best Practices in Health Care Management* – Edited by Sandra C. Buttigieg, Cheryl Rathert and Wilfried Von Eiff
- Volume 18: *Structural Approaches to Address Issues in Patient Safety* – Edited by Susan D. Moffatt-Bruce
- Volume 19: *Transforming Health Care: A Focus on Consumerism and Profitability* – Edited by Jennifer L. Hefner, Mona Al-Amin and Timothy R. Huerta, with Alison M. Aldrich and Tyler E. Griesenbrock
- Volume 20: *The Contributions of Health Care Management to Grand Health Care Challenges* – Edited by Jennifer L. Hefner and Ingrid Nembhard
- Volume 21: *Responding to the Grand Challenges in Healthcare Via Organizational Innovation: Needed Advances in Management Research* – Edited by Stephen M. Shortell, Lawton Robert Burns and Jennifer L. Hefner

ADVANCES IN HEALTH CARE MANAGEMENT  
VOLUME 22

**RESEARCH AND THEORY  
TO FOSTER CHANGE IN  
THE FACE OF GRAND  
HEALTH CARE  
CHALLENGES**

EDITED BY

**JENNIFER L. HEFNER**

*Ohio State University, USA*

**DORI A. CROSS**

*University of Minnesota, USA*

AND

**PATRICK D. SHAY**

*Trinity University, USA*



United Kingdom – North America – Japan  
India – Malaysia – China

Emerald Publishing Limited  
Emerald Publishing, Floor 5, Northspring, 21-23 Wellington Street, Leeds LS1 4DL

First edition 2024

Editorial matter and selection © 2024 Jennifer L. Hefner, Dori A. Cross and Patrick D. Shay.  
Individual chapters © 2024 The authors.  
Published under exclusive licence by Emerald Publishing Limited.

Chapter 5, Innovation Diffusion Across 13 Specialties and Associated Clinician Characteristics, copyright © 2024 Zhanna Novikov, Sara J. Singer and Arnold Milstein, is Open Access with copyright assigned to respective chapter authors. Published by Emerald Publishing Limited.



This work is published under the Creative Commons Attribution (CC BY 4.0) licence.

Anyone may reproduce, distribute, translate and create derivative works of this work (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licenses/by/4.0/legalcode>



Open Access

The ebook edition of this title is Open Access and is freely available to read online

#### **British Library Cataloguing in Publication Data**

A catalogue record for this book is available from the British Library

ISBN: 978-1-83797-656-0 (Print)

ISBN: 978-1-83797-655-3 (Online)

ISBN: 978-1-83797-657-7 (Epub)

ISSN: 1474-8231 (Series)



INVESTOR IN PEOPLE

# CONTENTS

<i>About the Editors</i>	vii
<i>About the Contributors</i>	ix
<i>List of Reviewers</i>	xiii
<i>Preface</i>	xv

## SECTION 1 PERSISTENT DRIVERS OF ENVIRONMENTAL UNCERTAINTY

<b>Chapter 1 Back to the Future: What Healthcare Organizations Need to Thrive in the Face of Persistent Environmental Uncertainty</b>	3
<i>Rachel Gifford, Arno van Raak, Mark Govers and Daan Westra</i>	
<b>Chapter 2 Measure Twice, Change Once: Using Simulation to Support Change Management in Rural Healthcare Delivery</b>	29
<i>Clair Reynolds Kueny, Alex Price and Casey Canfield</i>	
<b>Chapter 3 Examining Knowledge Management and the Culture Change Movement in Long-Term Care: A Study of High-Medicaid-Census Nursing Homes</b>	55
<i>Tory H. Hogan, Larry R. Hearld, Ganisher Davlyatov, Akbar Ghiasi, Jeff Szychowski and Robert Weech-Maldonado</i>	

## SECTION 2 MECHANISMS OF CHANGE – HOW LEADERS WITHIN ORGANIZATIONS FRAME AND EXECUTE CHANGE

<b>Chapter 4 Toward a Theory of Organizational DNA: Routines, Principles, and Beliefs (RPBs) for Successful and Sustainable Organizational Change</b>	77
<i>Mark Govers, Rachel Gifford, Daan Westra and Ingrid Mur-Veeman</i>	

<b>Chapter 5 Innovation Diffusion Across 13 Specialties and Associated Clinician Characteristics</b>	97
<i>Zhanna Novikov, Sara J. Singer and Arnold Milstein</i>	

<b>Chapter 6 Safe Surgery Checklist Implementation: Associations of Management Practice and Safety Culture Change</b>	117
<i>Maike Tietschert, Sophie Higgins, Alex Haynes, Raffaella Sadun and Sara J. Singer</i>	

### SECTION 3 ORGANIZATIONAL PREPAREDNESS AND RESPONSE IN THE FACE OF ACUTE CRISIS

<b>Chapter 7 Hospital Finances During the First Two Years of the COVID-19 Pandemic: Evidence From Washington State Hospitals</b>	143
<i>Nathan W. Carroll, Shu-Fang Shih, Saleema A. Karim and Shoou-Yih D. Lee</i>	

<b>Chapter 8 Sustaining Preparedness in Hospitals</b>	161
<i>Elveta D. Smith</i>	

### SECTION 4 SOCIOPOLITICAL AND DEMOGRAPHIC SHIFTS REQUIRE PREPAREDNESS OUTSIDE OF ACUTE CRISIS

<b>Chapter 9 The Coproduction of Health Framework: Seeking Instructive Management Models and Theories</b>	181
<i>Anne M. Hewitt</i>	

<b>Chapter 10 Perceived Value of the Inclusion of Parent-to-Parent Support in Case Conferences and Care Planning for Children With Special Healthcare Needs</b>	211
<i>Valerie A. Yeager, Jyotsna Gutta, Lisa Kutschera and Sarah M. Stelzner</i>	

<b>Chapter 11 Organizational and Policy Challenges and Priorities for Integrating Family Care Partners Into the Healthcare Team</b>	231
<i>Minakshi Raj</i>	

<i>Index</i>	239
--------------	-----

## **ABOUT THE EDITORS**

**Jennifer L. Hefner** is an Associate Professor in the Division of Health Management and Policy, The College of Public Health, Ohio State University, USA.

**Dori A. Cross** is an Assistant Professor in the Division of Health Policy and Management, School of Public Health, University of Minnesota, USA.

**Patrick D. Shay** is an Associate Professor in the Department of Health Care Administration at Trinity University, USA.

This page intentionally left blank

## ABOUT THE CONTRIBUTORS

**Casey Canfield** is Assistant Professor in Engineering Management and Systems Engineering at Missouri S&T. She has an Engineering & Public Policy PhD from Carnegie Mellon University and Engineering: Systems BS from Olin College. Her research quantifies the human part of complex systems to improve decision-making in infrastructure transitions.

**Nathan W. Carroll** is Associate Professor of Healthcare Administration at Virginia Commonwealth University. His research focuses on understanding the financial incentives healthcare organizations face, and how organizations are responding to those incentives.

**Ganisher Davlyatov**, The University of Oklahoma Health Sciences Center, Department of Health Administration and Policy.

**Akbar Ghiasi**, University of the Incarnate Word, H-E-B School of Business and Administration.

**Rachel Gifford** is Assistant Professor of Healthcare Management and Organization Studies at Maastricht University. She holds a PhD in Organizational Behavior from University of Groningen. Her research interests include the organization of care delivery and healthcare professionals, organizational adaptation and the evolution of professional work in health care.

**Mark Govers** is Associate Professor in Organisation and Management at Maastricht University's Care and Public Health Research Institute (CAPHRI). He holds a PhD on the intersection between business information technology and organization development. His interests include socio-technical systems thinking, and digital developments and entrepreneurial behavior.

**Jyotsna Gutta** is Policy Analyst in the Center for Health Policy in the Department of Health Policy & Management at the Indiana University Richard M. Fairbanks School of Public Health in Indianapolis.

**Larry R. Hearld**, The University of Alabama at Birmingham, School of Health Professions, Department of Health Services Administration.

**Anne M. Hewitt** is Professor and Chair for the Department of Interprofessional Health Sciences and Health Administration and a Professor at Seton Hall University. She is primary editor of *Population Health Management: Strategies*,

*Tools, Applications and Outcomes* and author of the upcoming text, *Population Health: Practical Skills for Future Health Professionals*.

**Tory H. Hogan**, The Ohio State University, College of Public Health, Division of Health Services Management and Policy.

**Saleema A. Karim**, Associate Professor of Healthcare Administration at Virginia Commonwealth University. Her research focuses on hospital financial sustainability, disparities, geographic variation, and HVBP and HRRP reimbursement.

**Clair Reynolds Kueny**, Associate Professor at Missouri S&T, received her MS and PhD in Industrial-Organizational Psychology from Saint Louis University. Her research related to applying organizational theory to healthcare delivery has been published in outlets including *Occupational Health Science*, *Journal of Clinical Oncology*, and *Journal of Interprofessional Education & Practice*.

**Lisa Kutschera** is rotation coordinator for the Medical Residency Program for the IU School of Medicine located on the Indianapolis Campus. Lisa is also the parent of a son with Autism.

**Shou-Yih D. Lee** is the inaugural Martha and Wickliffe Lyne Professor of Health Administration at Virginia Commonwealth University. He is an organizational sociologist and health services researcher whose research seeks to improve health care delivery through critical examination of factors that drive organizational as well as individual decisions and behaviors.

**Robert Wheech Maldonado**, The University of Alabama at Birmingham, School of Health Professions, Department of Health Services Administration.

**Arnold Milstein**, Stanford University School of Medicine, is the Director of the Clinical Excellence Research Center at Stanford University. The Center discovers and disseminates innovations in clinical process and bedside applications of machine intelligence that lower the cost of high-quality health care.

**Ingrid Mur-Veeman** was Associate Professor in Organisation and Management at Maastricht University in Maastricht, the Netherlands. She played an initiating role in conceptualizing the RPB concept within the organizational DNA theory. She passed away in 2016.

**Zhanna Novikov**, UTHealth Houston, School of Public Health and Stanford University School of Medicine, is interdisciplinary researcher who applies organizational theory and behavior models to explore how individuals and teams in health care can innovate and improve care-safety. She's an affiliate of Stanford University's Clinical Excellence Research Center.

**Alex Price** is Assistant Professor in Radiation Oncology at Case Western Reserve SoM. He is currently pursuing his PhD in Systems Engineering from Missouri S&T. He has an MS in Medical Physics from Duke University. His research interests are healthcare systems modeling and novel approaches to radiation oncology.

**Minakshi Raj** is Assistant Professor at the University of Illinois Urbana Champaign. Her research focuses on identifying organizational and policy approaches to integrating family caregivers of older adults into the health care system with an emphasis on culturally diverse caregivers.

**Shu-Fang Shih** is Assistant Professor of Healthcare Administration at Virginia Commonwealth University. Her research provides empirical evidence that supports the design and implementation of human-centered, technology-driven, and integrated health and social care models to improve population health and promote health equity.

**Sara J. Singer**, Stanford University School of Medicine and Graduate School of Business, is Associate Director of the Clinical Excellence Research Center at Stanford university. Her research in health care management and policy focuses on how organizational leadership and culture impact efforts to implement health delivery innovations, integrate patient care, improve safety and reliability of health care organizations, and promote a culture of health.

**Elveta D. Smith** is Associate Professor in the Master of Healthcare Administration program at the University of North Carolina at Wilmington. After 20 years in hospital administration, she now teaches future healthcare leaders.

**Sarah M. Stelzner** focuses on developing programs in Community Pediatrics (e.g., the Anne E. Dyson Community Pediatrics Training Initiative, and the Our Kids Our Community Advanced Training) to improve the skills and competencies of primary care pediatricians. She provides team-based care including care conferencing to underserved populations.

**Jeff Szychowski**, The University of Alabama at Birmingham, School of Public Health Department of Biostatistics.

**Arno van Raak** is a Sociologist. He has worked at Maastricht University as an Associate Professor until 2023. His research particularly concerns integrated care, care supply chains, and interorganizational networks of care providers. Among his publications is the book entitled “Integrated Care in Europe” (2003).

**Daan Westra** is Assistant Professor of Healthcare Management at Maastricht University’s Care and Public Health Research Institute (CAPHRI). His research focuses on the structures of and collaborative processes within interorganizational networks in the healthcare sector and across the healthcare and social services sectors.

**Valerie A. Yeager** is Professor and MPH Concentration Lead for the Department of Health Policy & Management at the Indiana University Richard M. Fairbanks School of Public Health in Indianapolis. Her research broadly examines the intersection and interaction of public health and health care.

# LIST OF REVIEWERS

<i>Mona Al-Amin</i>	Suffolk University, USA
<i>Nathan W. Carroll</i>	University of Alabama at Birmingham, USA
<i>Elveta Denise Smith</i>	University of North Carolina in Wilmington, USA
<i>Matt DePuccio</i>	Rush University, USA
<i>Bram Fleuren</i>	Maastricht University, Netherlands
<i>Greg Gascon</i>	Ohio State University and Ohio Health, USA
<i>Rachel Gifford</i>	Maastricht University, Netherlands
<i>Mark Govers</i>	Maastricht University, Netherlands
<i>Megan E. Gregory</i>	The Ohio State University, USA
<i>Anne M. Hewitt</i>	Seton Hall University, USA
<i>Tory Hogan</i>	Ohio State University, USA
<i>Clair Reynolds Kueny</i>	Missouri University of Science & Technology, USA
<i>Sarah R. MacEwan</i>	The Ohio State University, USA
<i>Zhanna Novikov</i>	UTHealth Houston, USA
<i>Minakshi Raj</i>	University of Illinois, USA
<i>Cynthia Sieck</i>	Dayton Children's Hospital, USA
<i>Lena Stevens</i>	Nationwide Children's Hospital, USA
<i>Maike Tietschert</i>	Erasmus University, Netherlands
<i>Dan Walker</i>	The Ohio State University, USA
<i>Daan Westra</i>	Maastricht University, Netherlands
<i>Valerie A. Yeager</i>	Indiana University Richard M. Fairbanks School of Public Health, USA

This page intentionally left blank

# PREFACE

We are pleased to share Volume 22 of *Advances in Health Care Management (AHCM): Research and Theory to Foster Change in the Face of Grand Health Care Challenges*. The past few volumes have focused on identifying and setting a research agenda for grand health care challenges (see Preface, Vol. 20, Hefner & Nembhard 2021). Through informed commentaries from prominent scholars in health care management, Volume 21 (Shortell et al., 2022) highlighted the current opportunities and challenges of: health system digitization; diversity, equity, and inclusion; COVID-19; performance improvement; network governance; inter-sector alliances; alternative payment models; and social determinants of health. A common theme across the chapters in Volume 21 was discussion of the organizational change needed to address these challenges.

Many have recognized that healthcare organizations today face the certainty of change as they confront varied grand challenges, all occurring in a broader landscape that scholars describe as radically and rapidly transforming at an unprecedented and accelerating pace (Amis & Greenwood, 2021; Dempsey et al., 2022). Such an environment is characterized by “exacerbated levels of uncertainty,” with people seeing and valuing their work differently as a result (Amis & Greenwood, 2021, p. 585; Wright et al., 2023). As healthcare leaders work to navigate the continual questions surrounding radical change and heightened uncertainty, they require an understanding of effective approaches to organizational change, yet what scholars know about change management continues to evolve.

Management models designed to understand and respond to organizational change have proliferated in the past several decades, with some of the most widely recognized models of change management now common elements in business administration and health administration education, such as Lewin’s (1947) three-step model, Kotter’s (1996) eight-step approach to change, or the ADKAR model for change (Hiatt, 2006). However, scholars are increasingly questioning commonly held views within the change management literature and the models they have shaped, finding empirically that no single model is a universally supported or clearly preferred approach to change management (Phillips & Klein, 2023). For example, they challenge the belief that the vast majority of changes result in failure, instead suggesting that change can yield both successes and failures simultaneously while also calling for a deeper examination and clarification of what we mean when we talk about change success or failure (By, 2020; Hughes, 2022; Suddaby & Foster, 2017). Numerous works have pushed against the assumption that successful organizational change results primarily from the behaviors, characteristics, or strategies of an individual acting as a

change agent in a position of authority, instead highlighting that change leadership can be provided from numerous sources, with intentional collaboration and effective configuration of coordinated change efforts mattering more than the specific sources of leadership functions (Cummings et al., 2016; Ford et al., 2021; Karasvirta & Teerikangas, 2022).

These and other developments in change management scholarship increasingly point to the value of approaches to change management that embrace complex adaptive systems thinking. The rational, standardized, and reductionist approaches to change management that were commonly employed throughout the 20th century are increasingly recognized as inadequate to address the emergent, complex, and wicked problems faced by today's health care delivery system. Transformational change is required and, as systems themselves, organizations must embrace systems thinking in order to realize effective transformation (Beer, 2021; Bryson et al., 2021; Waddock, 2020). A systems view challenges us to focus beyond a single variable or fragment of the system within change; instead, it recognizes the system's interconnected elements and purposes, making sense of it in ways that develop a new understanding of potential transformations, and promoting collective engagement among change agents to identify key leverage points producing sizable effects and long-term solutions (Gersick, 2020; Uhl-Bien, 2021; Waddock, 2020). However, the adoption of systems thinking in and of itself presents a significant challenge to organizations today, particularly among those subject to "short-term pressures for performance" and a general "reluctance to confront inconvenient and complicated truths that might expose deeper systemic barriers" (Beer, 2021, p. 16). In light of this, some may ask: Are today's healthcare organizations up for the challenge? To that question, we find the chapters collected for this volume provide reason for optimism.

In an environment characterized by ambiguity and uncertainty, effective change management can also be seen in the collaboration, coordination, and complementarity practiced among distributed sources of change leadership (Dempsey et al., 2022; Errida & Lotfi, 2021; Ford et al., 2021; Phillips & Klein, 2023). Scholars call for approaches to change management that emphasize the power of empathy, that recognize the importance of taken-for-granted social factors underlying processes of change, that promote the involvement of varied participants, and that foster an openness to engage deeply beyond surface-level changes, such as design thinking (Hvidsten et al., 2023) and leadership-as-practice (Raelin, 2022). Such approaches encourage levels of adaptation, improvisation, and creative problem solving that are commonly aligned with both systems thinking and design thinking (Shay, 2023), leading to more effective navigation of change in the midst of complexity (Hvidsten et al., 2023). Furthermore, the mindsets that connects systems thinking and human-centered approaches to problem solving such as design thinking – including collaboration, curiosity, mindfulness, resilience, recognition of interconnections, and an appreciation for diverse perspectives (Mugadza & Marcus, 2019; Shay, 2023; Shrier et al., 2020) – not only serve as drivers of effective change management, but they also emerge consistently in this volume's chapters as critical approaches to addressing health care's grand challenges.

Therefore, this year's volume examines how health care organizations position for, and pursue, successful sustained change. We organize the chapters into four complementary sections, each a mix of theoretical and empirical contributions to guide organizations in an environment of ever-evolving challenges.

*Our first section focuses on persistent drivers of environmental uncertainty to which health care organizations must be responsive.* Chapter 1, by Gifford and colleagues, offers a theory-building reflection on the changing ways in which health care organizations must understand and build capacity to thrive in a state of persistent, deep uncertainty. Using a framework that contrasts approaches to buffer against environmental change with efforts to actually incite and be on the leading edge of evolving expectations, authors propose the need for organizations to remain adaptive and – where possible – create potential futures rather than engaging in avoidant, controlling approaches to change. This chapter concludes with advice to organizations on how to move toward an “Adapt and Create” approach using systems thinking and the notion of temporal work – that is, encouraging individuals and teams to break the inertia of path dependency by challenging the linkages between “what was/is done” with what could or should be done.

The subsequent two chapters offer additional tools to organizations seeking to build resilience in the face of persistent environmental uncertainty. Chapter 2, by Reynolds, Price, and Canfield, focuses on the challenge of health care organizations needing to provide timely and accessible services in rural communities. Authors detail a simulation-based approach to model the feasibility and impact of proposed organizational changes as one way to assess readiness and guide subsequent change management efforts. They illustrate via case study how this approach was used to help guide design and implementation considerations for a mobile radiation oncology unit in a rural community. In Chapter 3, authors Hogan et al. detail a theory-driven empirical analysis focused on culture change in nursing homes – that is, highly regulated health care environments plagued by chronic under-resourcing. With the uncertainties caused by such persistent financial constraint, authors seek to identify the types of change management activity that are feasible in this environment and associated with these organizations moving toward a culture of more person-centered care. They find that knowledge management (i.e., the seeking and use of information relevant to guiding organizational functioning) is associated with culture change, and that this relationship is moderated by leadership and measures of staffing ability. These findings offer insights to health care leaders looking to build adaptive systems that support organizational readiness for change despite chronic resource limitations.

*The second section of this volume focuses on the mechanisms of change – how leaders within organizations frame and execute change.* Chapter 4, by Govers et al., offer a theoretical consideration of why organizational change often fails, using a framework that suggests that leaders too often attempt to change routines without first modifying the underlying principles and beliefs of organizational work. Using an analogy of organizational DNA to detail how principles, beliefs, and routines bind together an organization's core technical capabilities and social

capital, they use an exemplar case to showcase specific aspects of leadership intentionality and action that foster deep successful change. However, successful change also depends on characteristics of the innovation itself, and of the individuals leading the effort. In Chapter 5, Novikov, Singer, and Milstein, use a national survey of clinicians to assess how these characteristics are associated with use of artificial intelligence and other forms of innovation diffusion. Authors investigate how individuals' job aspects associated with connectivity (i.e., professional purview, supervisory responsibility, tenure with an organization) increase knowledge and awareness of innovation such that they are more likely to use and spread care delivery innovations. A key part of this knowledge and awareness building is its association with higher perception of value of new innovations, which may build personal interest in engagement as well as these individuals' ability to facilitate diffusion within their network. Chapter 6, by Tietschert et al., explores the association between management practices and safety culture after implementation of the Safe Surgery Checklist. They use longitudinal survey data from the checklist implementation at 42 general acute care hospitals in a leading hospital network. Their findings suggest that the changes in safety culture encouraged by implementation of the Safe Surgery Checklist are significantly related to changes in management practices, highlighting structured checklist implementation as an avenue for hospital administrators to enhance safety culture in their organizations.

*The third section of this volume investigates organizational preparedness and response in the face of acute crisis.* In Chapter 7, Carroll et al. investigate the extent to which hospital finances were impacted in Washington state due to the Covid-19 pandemic. They find a significant hit to operating margins across all hospitals for 2020 and 2021, with hospitals that treat vulnerable patients being most affected (i.e., safety-net and critical access hospitals). Both revenues and expenses were adversely impacted by the pandemic. This analysis calls into question what organizations can be doing now to buffer against the financial vulnerability caused by such extended acute disruption. A detailed commentary by Dr Smith in Chapter 8 highlights the cyclical nature of organizational attention to preparedness over the past 20 years, and the threat of complacency that sets in between spikes of large-scale crises. This chapter describes post-event recommendations issued after each recent global epidemic, and finds a lack of depth or substance in the guidance given to organizations to support sustained preparedness alongside normal operations.

*The fourth and final section of the volume highlights key ways in which socio-political and demographic shifts are encouraging organizations to reconsider what preparedness means outside of acute crisis.* In Chapter 9, Hewitt interrogates limitations of outdated paradigms we hold about health systems and health care delivery. The author details an updated "co-production of health" framework that better reflects the boundary-spanning interorganizational and inter-sector ways that health and value are created for patients and communities. This chapter offers important suggestions for future research that refines and tests this model as a useful way to design and execute transformative organizational change. Chapter 10, by Yeager and colleagues, offers a thoughtful examination of

one way in which a large health system embraced a community-partnered approach to care delivery. This study qualitatively explores efforts to enhance case conferencing for children with complex needs by using parent liaisons to facilitate connection with community resources and social support. Indeed, having these boundary-spanning agents helped organizations offer patients more holistic services that reduced stress for clinicians as well as family members. Authors offer insights into the necessary coordination structures and policy-based payment changes that would help sustain this model of care. Finally, in Chapter 11, Dr Minakshi Raj offers a commentary piece that draws attention to family caregivers as a critical but under-recognized partner in the co-production of health. She details the problems of a fragmented policy landscape and a lack of enabling factors (e.g., time, awareness, connectivity) that allow for meaningful engagement of caregivers. Using a coproduction of health paradigm, organizational leaders should be thinking strategically about how to proactively integrate caregivers as boundary-spanning and value-generating members of the care team.

Jennifer L. Hefner, PhD, MPH, Ohio State University  
Dori A. Cross, PhD, University of Minnesota  
Patrick D. Shay, PhD, MS, Trinity University

## REFERENCES

- Amis, J. M., & Greenwood, R. (2021). Organisational change in a (post-) pandemic world: Rediscovering interests and values. *Journal of Management Studies*, 58(2), 582–586.
- Beer, M. (2021). Reflections: Towards a normative and actionable theory of planned organizational change and development. *Journal of Change Management*, 21(1), 14–29.
- Bryson, J. M., Barberg, B., Crosby, B. C., & Patton, M. Q. (2021). Leading social transformations: Creating public value and advancing the common good. *Journal of Change Management*, 21(2), 180–202.
- By, R. T. (2020). Organizational change and leadership: Out of the quagmire. *Journal of Change Management*, 20(1), 1–6.
- Cummings, S., Bridgman, T., & Brown, K. G. (2016). Unfreezing change as three steps: Rethinking Kurt Lewin's legacy for change management. *Human Relations*, 69(1), 33–60.
- Dempsey, M., Geitner, L., Brennan, A., & McAvoy, J. (2022). A review of the success and failure factors for change management. *IEEE Engineering Management Review*, 50(1), 85–93.
- Errida, A., & Lotfi, B. (2021). The determinants of organizational change management success: Literature review and case study. *International Journal of Engineering Business Management*, 13, 1–15.
- Ford, J., Ford, L., & Polin, B. (2021). Leadership in the implementation of change: Functions, sources, and requisite variety. *Journal of Change Management*, 21(1), 87–119.
- Gersick, C. (2020). Reflections on revolutionary change. *Journal of Change Management*, 20(1), 7–23.

- Hiatt, J. M. (2006). *ADKAR: A model for change in business, government and our community*. Prosci, Inc.
- Hughes, M. (2022). Reflections: How studying organizational change lost its way. *Journal of Change Management*, 22(1), 8–25.
- Hvidsten, A., Rai, R. S., & By, R. T. (2023). Design(erly) thinking: Supporting organizational change and leadership. *Journal of Change Management*, 23(1), 1–11.
- Karasvirta, S., & Teerikangas, S. (2022). Change organizations in planned change – A closer look. *Journal of Change Management*, 22(2), 163–201.
- Kotter, J. P. (1996). *Leading change*. Harvard Business Press.
- Lewin, K. (1947). Frontiers in group dynamics: Concept, method and reality in social science; equilibrium and social change. *Human Relations*, 1(1), 5–41.
- Mugadza, G., & Marcus, R. (2019). A systems thinking and design thinking approach to leadership. *Expert Journal of Business and Management*, 7(1), 1–10.
- Phillips, J., & Klein, J. D. (2023). Change management: From theory to practice. *TechTrends*, 67, 189–197.
- Raelin, J. (2022). What can leadership-as-practice contribute to OD? *Journal of Change Management*, 22(1), 26–39.
- Shay, P. D. (2023). Leadership matters – for healthcare’s present and future. In C. F. Dye (Ed.), *Leadership in healthcare: Essential values and skills* (4th ed., pp. 389–412). Health Administration Press.
- Shortell, S. M., Burns, L. R., & Hefner, J. L. (Eds.). (2022). *Responding to the grand challenges in health care via organizational innovation: Needed advances in management research*. Emerald Publishing Limited.
- Shrier, L. A., Burke, P. J., Jonestrask, C., & Katz-Wise, S. L. (2020). Applying systems thinking and human-centered design to development of intervention implementation strategies: An example from adolescent health research. *Journal of Public Health Research*, 9(1746), 376–380.
- Suddaby, R., & Foster, W. M. (2017). History and organizational change. *Journal of Management*, 43(1), 19–38.
- Uhl-Bien, M. (2021). Complexity leadership and followership: Changed leadership in a changed world. *Journal of Change Management*, 21(2), 144–162.
- Waddock, S. (2020). Thinking transformational system change. *Journal of Change Management*, 20(3), 189–201.
- Wright, A. L., Irving, G., Zafar, A., & Reay, T. (2023). The role of space and place in organizational and institutional change: A systematic review of the literature. *Journal of Management Studies*, 60(4), 991–1026.

# SECTION 1

## PERSISTENT DRIVERS OF ENVIRONMENTAL UNCERTAINTY

This page intentionally left blank

## CHAPTER 1

# BACK TO THE FUTURE: WHAT HEALTHCARE ORGANIZATIONS NEED TO THRIVE IN THE FACE OF PERSISTENT ENVIRONMENTAL UNCERTAINTY

Rachel Gifford, Arno van Raak, Mark Govers  
and Daan Westra

*Maastricht University, The Netherlands*

### ABSTRACT

*While uncertainty has always been a feature of the healthcare environment, its pace and scope are rapidly increasing, fueled by myriad factors such as technological advancements, the threat and frequency of disruptive events, global economic developments, and increasing complexity. Contemporary healthcare organizations thus persistently face what is known as “deep uncertainty,” which obscures their ability to predict outcomes of strategic action and decision-making, presenting them with novel challenges and threatening their survival. Persistent, deep uncertainty challenges us to revisit and reconsider how we think about uncertainty and the strategic actions needed by organizations to thrive under these circumstances. Simply put, how can healthcare organizations thrive in the face of deeply uncertain environments? We argue that healthcare organizations need to employ both adaptive and creative strategic approaches in order to effectively meet patients’ needs and capture value in the long-term future. The chapter concludes by offering two ways organizations can build the dynamic capabilities needed to employ such approaches.*

---

Research and Theory to Foster Change in the Face of Grand Health Care Challenges  
Advances in Health Care Management, Volume 22, 3–27  
Copyright © 2024 Rachel Gifford, Arno van Raak, Mark Govers and Daan Westra  
Published under exclusive licence by Emerald Publishing Limited  
ISSN: 1474-8231/doi:10.1108/S1474-823120240000022001

**Keywords:** Healthcare organizations; environmental uncertainty; strategic management; grand challenges; organizational adaptation; future studies

## INTRODUCTION

The pace and scope of uncertainty facing today's organizations is rapidly increasing (Teece et al., 2016). While uncertainty has always been a feature of the healthcare environment, both the threat of (OECD, 2023) and the frequency of severe environmental disturbances is growing (Mithani, 2020), creating persistent and sustained environmental uncertainty that yields novel challenges for healthcare organizations (Issel et al., 2023). For example, the early 2020s have been marked by a global pandemic, political turmoil, and social unrest (Barrett, 2022), and the outbreak of war with severe global and economic consequences (OECD, 2023). These punctuated events occur in addition to more gradual but deeply impactful crises – or “grand challenges” – that healthcare organizations face, such as achieving the quadruple aim (Hefner & Nembhard, 2021) or mitigating healthcare's climate footprint and the impact of climate change on populations' healthcare needs (Hensher & McGain, 2020; Karliner et al., 2020). These challenges furthermore interact with one another in complex and unpredictable ways, perpetuating their scope and impact (Hefner & Nembhard, 2021). It can thus be argued that today's organizations face what Teece and colleagues (2016) label persistent, “deep uncertainty,” where complexity is high and outcomes are not easily predictable. In such environments, the ability of organizations and managers to comprehend or assess all the outcomes of the many decisions they must make is significantly diminished (Alvarez et al., 2018), presenting healthcare organizations with novel challenges and requiring a new understanding of how organizations can thrive in the face of deep uncertainty.

In light of recent events, there have been calls in the general management literature for more attention to how organizations respond to environmental uncertainty (Alvarez et al., 2018; George et al., 2016) as well as the importance of taking into account the increased frequency and life-threatening nature of environmental threats (Mithani, 2020). Some scholars assert that organizational and management researchers tend to neglect environmental uncertainty as a central concept in organization theory (Alvarez et al., 2018), and more specifically, the contingent relationship between perceived uncertainty within the environment and strategic decision-making processes (e.g., López-Gamero et al., 2011). Alvarez and colleagues (2018) suggest this is because environmental uncertainty has “fallen out of favor” in many disciplines (p. 169), with scholars focusing instead on other aspects of the environment such as stakeholder expectations or regulations (López-Gamero et al., 2011). However, the shift to persistent, deep uncertainty challenges us to revisit and reconsider how we think about uncertainty and the strategic approaches organizations need to effectively deal with it (c.f., Fergnani, 2022; Griffin & Grote, 2020; Rindova & Courtney, 2020). The extant literature comprises primarily two lines of thinking about how organizations can deal with uncertainty: (1) adapting to uncertainty; and, (2) preventing

or controlling uncertainty. However, given its persistence in the current environment, trying to prevent or control uncertainty has become untenable. We argue that in such an environment, healthcare organizations not only need to learn to cope with and adapt to uncertainty but should also become more proactive (Schilke et al., 2018) and search for opportunities to exploit their uncertain surroundings. For example, while scholars have been quick to point out the turmoil resulting from global crises like the COVID-19 pandemic, we note how such situations of high uncertainty have inspired rapid, large-scale change and innovation, such as the expansion of eHealth (Hollander & Carr, 2020) and improved interorganizational networks during COVID-19 (Gifford et al., 2022). Therefore, we need a more thorough consideration of how organizations can cope with and adapt to uncertainty, as well as how they might embrace and use uncertainty as the means to thrive, creating new ways of organizing and new innovations.

In this chapter, we question how healthcare delivery organizations (HCOs) can thrive in uncertain environments, bounding our scope specifically to HCOs that provide care delivery services such as hospitals, nursing homes, and primary care practices, among others. We conceptualize *thriving* in this context as organizations that are able to achieve their goals and create value despite persistently uncertain conditions. We unpack this question by focusing on which strategic approaches organizations can – and should – adopt in the face of uncertainty as well as identifying the underlying capabilities that HCOs need in order to employ these approaches. In doing so, we take up the calls for management scholars to “take uncertainty seriously” (Alvarez et al., 2018, p. 169), offering insights into how HCOs can go beyond merely trying to survive in uncertain environments (e.g., weathering external shocks but potentially sacrificing goals or failing to create value), and instead thrive in the face of uncertainty by achieving goals and generating new opportunities to create value (Mithani, 2020).

We first offer a review of existing theory to conceptualize uncertainty and consider what strategic approaches organizations should employ when we classify uncertainty as a given environmental feature. While we recognize that healthcare management scholars have examined the concept of uncertainty widely, we refer specifically to the application of strategic management to HCOs in the context of uncertainty, identifying that as an area still ripe for further exploration (c.f., Agwunobi & Osborne, 2016). Thus, we review the rich body of literature in strategic management to support the conceptualization of the environment as persistently uncertain, allowing us to focus on the strategic responses of HCOs to persistent and dynamic uncertainty. Using the insights gleaned from our initial review, we draw upon strategic management literature to propose what specific capabilities are needed for organizations to move toward and employ these approaches. Lastly, we identify ways in which HCOs can thrive in the face of persistent uncertainty. We posit that the difference between simply maintaining organizational continuity in spite of external changes (i.e., surviving) versus capitalizing on the environment to improve, expand, or pivot the organization to create more value (i.e., thriving) may be the key to not only short-term survival but long-term success and innovation within the field.

## BACKGROUND: UNCERTAINTY

In this chapter, we focus on environmental uncertainty. This type of uncertainty is classified as external or exogenous uncertainty, as it exists beyond and independently of individuals (Griffin & Grote, 2020). As Kreiser and Marino (2002) point out in their historical analysis, environmental uncertainty has been explored in the literature for almost a century, beginning with Barnard's *The Functions of the Executive* (1938). As a result, there have been several conceptualizations of environmental uncertainty, and the concept has suffered from conceptual ambiguity (Kreiser & Marino, 2002) and insufficient understanding (Milliken, 1987). While it is beyond the scope of this chapter to offer a full review of classical perspectives on environmental uncertainty, in our focus on strategic approaches in response to uncertainty, we subscribe generally to the notion of uncertainty as a lack of information about the external environment (Duncan, 1972; Lawrence & Lorsch, 1967; Milliken, 1987). In this regard, Duncan's (1972) conceptualization of environmental uncertainty offers a useful starting point.

Duncan (1972) explicated three key components of uncertainty that are directly relevant for strategic decision-making: (1) lack of information regarding the environmental factors associated with a specific decision, (2) not knowing the outcome of a specific decision in terms of how much the organization would lose if the decision were incorrect, and (3) inability to assign probabilities with any degree of confidence with regard to how environmental factors are going to affect the success or failure of the decision unit in performing its function. In this view, environmental uncertainty makes it difficult for organizations to predict or anticipate the future directions of the external environment within which they are situated (Kafetzopoulos et al., 2019) due to a lack of complete information. This aligns with later reviews of environmental uncertainty as cited by organization theorists (Milliken, 1987), which leads us to a comprehensive definition of environmental uncertainty as "a state of the environment in which organizations and decision makers are faced with a lack of information about current and future events which significantly impacts their ability to assign probabilities to both the occurrence of future events and potential outcomes of decision making." This definition highlights both the complexity of strategic decision-making and the need for the development of dynamic capabilities in order to better sense and seize opportunities and threats in the environment (Teece et al., 1997, 2016).

Scholars have studied uncertainty by examining the environment (i.e., considering uncertainty as an objective feature of that environment) as well as by examining perceptions of the environment (i.e., considering uncertainty as a psychological state). An emphasis on uncertainty as a psychological state gained traction in the 1970s (Downey & Slocum, 1975), which was contrasted by scholars who emphasized the objective features of the environment (López-Gamero et al., 2011). In the present study, we conceptualize environmental uncertainty as an objective state in the current environment that requires organizations to adapt their strategic approaches. We certainly acknowledge the core argument in work that focuses on perceived uncertainty (Downey & Slocum, 1975); namely, that in organizations' reactions to uncertainty, individuals'

perceptions matter, such as in their sensemaking trajectories and when deciding whether to enact a certain strategy. However, we do not take the view of scholars who suggest that decision-makers' perceptions of uncertainty is what matters most (Dill, 1958; Downey et al., 1975; Duncan, 1972; Lawrence & Lorsch, 1967). Rather, we align with the notion of environmental uncertainty as an objective state and environment "in which the relevant factors for decision making are in a constant state of change" (Downey & Slocum, 1975, p. 573), which complicates the decision-making process for organizations. We suggest that, when viewing environmental uncertainty in this way, focus should be directed on the *capabilities* needed by managers and organizations to both ensure organizational survival and thrive in such an environment, rather than on assessing individuals' perceptions and processing of information.

### *Uncertainty as a Given Environmental Feature*

The prevalence and importance of environmental uncertainty for organizations has been clearly identified over decades of organization theory literature. Classical theorists such as Thompson (1967) and Milliken (1987) put forward the notion that uncertainty is "the fundamental problem with which top-level organizational administrators must cope" (Thompson, 1967, p. 159). Recent work has extended this sentiment, recognizing the fundamental nature of uncertainty for all levels of the organization. For example, Teece (2018) has recently highlighted that the capabilities firms need to flourish relate to addressing the "prevailing degree of uncertainty" (p. 360). In contrast to Duncan (1972) and other classical theorists who position uncertainty as an ephemeral construct, suggesting that uncertain environments are temporary and sparse, we argue that, in the modern era, uncertainty is constant – particularly in the healthcare environment (c.f., Mithani, 2020).

While organizations have always faced some level of environmental uncertainty, the frequency of disruptive events or "surprises" is increasing (Mithani, 2020; Teece et al., 2016). Additionally, beyond the prevalence and probability of disruptive shocks, the environment itself has become increasingly uncertain, with increasing social unrest (Barrett, 2022), polarization, and politicization that present HCOs with "unique and unprecedented challenges" (Issel et al., 2023, p. 1). The general environment of HCOs is also influenced by "international forces such as world peace, global economy, and national conditions such as the demographic profile of the population, price inflation and unemployment rates" (Begun & Kaissi, 2004, p. 32).

The general environment not only provides context for HCOs but also influences their task environment, which has a more direct impact on organizational behavior and success (Ginter et al., 2018). This task environment includes resources (e.g., financial, physical, human), patients, suppliers, and regulatory and market conditions (Begun & Kaissi, 2004; Dill, 1958). For example, the Russian invasion of Ukraine in 2022 and its escalation of the Russo-Ukrainian war sparked a global economic downturn and energy crisis which resulted in increasingly constrained resources and drove supply costs up, creating more

precarious and difficult market conditions in the healthcare sector. Similarly, due to what has been dubbed the “great resignation,” HCOs face increasing uncertainty around the supply of their key resource: staff (Gifford et al., 2023). While HCOs have always faced uncertainty and have had to cope with environmental shocks, the likelihood of disruptive events increases as the general environment becomes increasingly unstable (Mithani, 2020). The increased probability and occurrence of shocks makes the environment deeply uncertain as “surprises and black swans become the norm” (Teece et al., 2016, p. 15), requiring new types of management and organizational capabilities.

Taking uncertainty as a given environmental feature does not imply that the nature or type of uncertainty is static. In fact, the reality that organizations face several types of uncertainty and that the level and type of uncertainty that is prominent is ever changing is what makes the environment so persistently uncertain, complicating organizational responses. Drawing upon Milliken’s (1987) work, and based upon the definition of environmental uncertainty as previously introduced (Duncan, 1972), there are three types of uncertainty that affect organizations: state uncertainty, effect uncertainty, and response uncertainty. State uncertainty – referring to the unpredictability of the state of the environment – is most closely related to other conceptualizations of environmental uncertainty. Examples of state uncertainty include general shifts in the external environment, such as changing demographics, or potential regulatory actions that may significantly alter the state of the external environment in which organizations are embedded.

Effect uncertainty pertains to the inability to predict the effects of environmental shifts on the organization. For example, at a certain point, HCOs knew that COVID-19 was going to impact them, but due to the unknown nature of the disease, its pathology, and its treatment, there was high uncertainty regarding the effects it would have for organizations and the healthcare system (Begun & Jiang, 2020).

Drawing upon the same example of the COVID-19 pandemic, we can also see a clear illustration of the third type of uncertainty: response uncertainty. Response uncertainty refers to a lack of information or knowledge about how to respond, or an inability to predict the probable outcomes of a certain action (Milliken, 1987). As Milliken (1987) describes, this uncertainty often accompanies the need to act in response to an event that poses a threat or opportunity. During the COVID-19 pandemic, HCOs needed to take action without clear knowledge of the repercussions of their choices. Empirical work by Gifford and colleagues (2022) has shown that the responses to the pandemic varied between HCOs as well as over time within a single HCO. While it is important to recognize these different types of uncertainty, it is their intermingling, coexistence, and dynamic evolution (rather than their individual characteristics) that creates a persistently uncertain environment and requires organizations to alter their strategic approaches to enable them to effectively face all types of uncertainty.

### *Persisting Uncertainty in Health Care*

In the Uncertainty as a Given Environmental Feature section, we conceptualized uncertainty as a given environmental feature for modern day organizations.