

Telemanagement of Inflammatory Bowel Disease

Raymond K. Cross • Andrew R. Watson
Editors

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 Springer

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Raymond K. Cross
Department of Medicine, Division
of Gastroenterology and Hepatology
University of Maryland, Baltimore
Baltimore
Maryland
USA

Andrew R. Watson
Department of Colorectal Surgery
University of Pittsburgh Medical Center
Pittsburgh
Pennsylvania
USA

ISBN 978-3-319-22284-4

ISBN 978-3-319-22285-1 (eBook)

DOI 10.1007/978-3-319-22285-1

Library of Congress Control Number: 2015947957

Springer Cham Heidelberg New York Dordrecht London

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Printed on acid-free paper

Springer International Publishing AG Switzerland is part of Springer Science+Business Media
(www.springer.com)

Foreword

History is punctuated with the dramatic innovations that have changed the way entire populations live and work. Think about the invention of the printing press. The Industrial Revolution. The Internet Age. Each of these revolutions involved the introduction of disruptive new technologies that enabled people to do things they could hardly imagine before.

I believe that we are living through such a revolution right now in health care. The combination of communication technologies, new medical devices, the Internet, and powerful analytic capabilities has converged to create entirely new ways of delivering health care. Telemedicine, virtual health care, mobile health—whatever you choose to call it—is presenting unequalled opportunities to improve access and quality, while reducing cost.

Never before have we had the chance to create truly patient-centered health-care systems at a cost we can afford.

Health-care providers have begun to realize this potential, and as a result, telemedicine is erupting in pockets all over the globe. Where I live, here in Ontario, we have created one of the largest telemedicine networks in the world, the Ontario Telemedicine Network, to connect providers, patients, and families over our vast geography. Last year, 488,000 patient teleconsultations were performed in the province, eliminating distance and travel as a barrier to care and providing unparalleled access. As we continue to grow, we continually look for new and better ways to leverage technology to enhance care delivery and engage patients.

This book represents a sentinel example of a “new and better way.” Patients with inflammatory bowel disease (IBD) need specialized expertise and ongoing, consistent expert advice and self-management support that is—simply said—a scarce resource. Telemedicine is the only practical way to reach out to all those affected by the disease to provide the support they need, when and where they need it. With tremendous pressure to provide a higher quality of care and reduce the costs of care, telemedicine is an absolute necessity for these long-term patients.

Drs. Cross and Watson with their colleagues have put it all in one place, combining evidence with their substantial practical experience to provide a comprehensive guide to the future of IBD management. Using teleconsultation, telemanagement, telemonitoring, and telementoring, this book paints a picture of how technology enables new and better models of care delivery and patient empowerment.

This is the best practice of the future, delivered now.

Edward M. Brown, MD

Preface

Springer International Publishing AG, Raymond K. Cross, Andrew R. Watson, and contributing authors have developed the first edition of *Telemanagement of Inflammatory Bowel Disease* to provide a comprehensive summary of telemedicine in the care of patients with inflammatory bowel disease (IBD).

The field of IBD, comprising Crohn's disease (CD) and ulcerative colitis (UC), has changed dramatically in the last 15 years. Increasing use of immune suppressants, development of biologic therapies, including anti-tumor necrosis α agents and anti-integrin agents, and clinical research on optimization of existing therapies has resulted in greater expectations for treatment. Indeed, expectations for treatment are evolving beyond improvement in bowel symptoms to achieve steroid-free clinical remission, biologic remission, and mucosal healing. Advances in surgical techniques and in particular minimally invasive techniques are leading to faster recovery, less postoperative adhesions, and a new diagnostic modality—exploratory laparoscopy. Reaching these more stringent outcomes is associated with fewer flares of disease, decreased hospitalizations, decreased complications, and decreased surgeries.

Unfortunately, despite advances in care, a significant proportion of patients experience suboptimal outcomes. Barriers to successful treatment outcomes include, but are not limited to, access to specialist IBD care, adverse effects of drug therapy, nonadherence, psychosocial comorbidities, inadequate monitoring, poor provider adherence to published guidelines, lack of education, and patient–provider discordance. Telemedicine approaches including telephone triage/education, telemonitoring, teleconsultation, teleconferences, and disease tracking through mobile applications have shown promise in improving outcomes further and for chronic disease management in patients with IBD. With the significant advances in the consumer electronics market and the maturation of telemedicine, access to patients, caregivers, and information has never been easier. The trend to a more technologically empowered health-care system and consumer is rapidly increasing. Therefore, telemedicine offers a consumer friendly and potent new model of care to enable the treatment of one of the most challenging subsets of chronic diseases, IBD.

This textbook provides a comprehensive, state-of-the art review of this field, and will serve as a valuable resource for medical and surgical clinicians, trainees,

allied health professionals, industry and clinical researchers with an interest in telemedicine applications in IBD. The book will review barriers to successful outcomes in patients with IBD and offer a rationale for how self-management and telemedicine approaches can improve care in chronic illnesses such as IBD. A summary of the impact of telemedicine in other chronic illnesses will launch additional topics focused on the use of telemedicine in patients with IBD. This review will include a summary of the burden of telephone encounters in patients with IBD, characteristics of frequent callers to the office, outcomes associated with high telephone use, and strategies to provide education via telephone encounters to patients with IBD. We will also summarize prior literature on implementation of teleconsultation in research and clinical practice as well as mobile applications used to track symptoms, quality of life, diet, and medication use in IBD. We will also summarize recent randomized, clinical trials that have evaluated telemonitoring and patient self-management on clinical outcomes in patients with IBD. This review will also discuss a recently created teleconference, IBD Live, which was developed to facilitate complex multidisciplinary care across institutions and to improve provider education in IBD care. Considerable details will be provided surrounding system requirements, legal, regulatory, and ethical issues related to use of telemedicine applications. Lastly, the review will offer future directions for use of telemedicine applications in the care of patients with IBD and other chronic illnesses in the changing marketplace.

The intersection of chronic disease management, virtualized health care via telemedicine, and the most sophisticated medical/surgical treatments is paramount to treating complex patients and stabilizing the escalating health-care cost in our country. This book captures a paramount example of the deployment of telemedicine for this purpose.

This book would not have been possible without the outstanding dedication of the contributing authors and the editorial staff at Springer. We are deeply grateful for their efforts.

We hope that you find Telemanagement of Inflammatory Bowel Disease in implementing or enhancing use of telemedicine applications as part of your clinical practice. If you have any comments or feedback on ways we can improve this book, please contact us at rcross@medicine.umaryland.edu or watsar@upmc.edu.

Sincerely,

Raymond K. Cross,
M.D., M.S.
Andrew R. Watson,
M.D., M.Litt., FACS

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Contributors

Ashish Atreja Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, NY, USA

David G. Binion Department of Medicine, Division of Gastroenterology, Hepatology and Nutrition, UPMC Presbyterian Hospital, UPMC Presbyterian, Pittsburgh, PA, USA

Jessica A. Briscoe Department of Gastroenterology and Hepatology, University of Maryland School of Medicine, Baltimore, MD, USA

Johan Burisch Department of Gastroenterology, North Zealand Hospital, University of Copenhagen, Frederikssund, Capital Region, Denmark

Benjamin H. Click Division of Gastroenterology, Hepatology and Nutrition, UPMC, Pittsburgh, PA, USA

Julia B. Greer Division of Gastroenterology, Department of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

Daniel W. Hommes UCLA Center for Inflammatory Bowel Diseases, Melvin and Bren Simon Digestive Diseases Center, David Geffen School of Medicine, University of California, Los Angeles, CA, USA

Sara Horst Department of Gastroenterology, Hepatology and Nutrition, Inflammatory Bowel Disease Center, Vanderbilt University Medical Center, Nashville, TN, USA

Sunanda Kane Division of Gastroenterology and Hepatology, Mayo Clinic Rochester, Rochester, MN, USA

Laurie Keefer Department of Gastroenterology and Hepatology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA

John Kornak Office of Telehealth, University of Maryland Medical Center, Baltimore, MD, USA

Robin Ligler Department of Gastroenterology, Hepatology and Nutrition, Vanderbilt University Medical Center, Nashville, TN, USA

Pia Munkholm Department of Gastroenterology, North Zealand Hospital, University of Copenhagen, Frederikssund, Capital Region, Denmark

Sandra M. Quezada Department of Gastroenterology and Hepatology, University of Maryland School of Medicine, Baltimore, MD, USA

Claudia Ramos Rivers Department of Medicine, Division of Gastroenterology, Hepatology and Nutrition, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

Miguel D. Regueiro Department of Gastroenterology, University of Pittsburgh, Pittsburgh, PA, USA

H. Neal Reynolds Division of Critical Care Medicine, R. Adams Cowley Shock Trauma Center, University of Maryland Medical Center, Baltimore, MD, USA

Welmoed K. van Deen UCLA Center for Inflammatory Bowel Diseases, Melvin and Bren Simon Digestive Diseases Center, David Geffen School of Medicine, University of California, Los Angeles, CA, USA

Praneet Wander Department of Internal Medicine, Mount Sinai St. Lukes Roosevelt Hospital, New York, NY, USA

Andrew R. Watson Department of Colorectal Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

Anita K. Witzke Department of eCare, University of Maryland Medical System, Baltimore, MD, USA

Marc T. Zubrow Department of Medicine, University of Maryland School of Medicine, Baltimore, 110 S. Paca Street, Suite 5-N-164MD, USA

Department of eCare, University of Maryland Medical System, Baltimore, MD, USA

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Cross, R.K.; Watson, A.R. (Eds.)

2016, XII, 194 p., Hardcover

ISBN: 978-3-319-22284-4