

Marlene M. Maheu · Kenneth P. Drude  
Shawna D. Wright *Editors*

# Career Paths in Telemental Health

 Springer

# Career Paths in Telemental Health

Marlene M. Maheu • Kenneth P. Drude  
Shawna D. Wright  
Editors

# Career Paths in Telemental Health

 Springer

*Editors*

Marlene M. Maheu  
San Diego, CA, USA

Kenneth P. Drude  
Kenneth P. Drude, Ph.D. LLC.  
Dayton, OH, USA

Shawna D. Wright  
Wright Psychological Services, LLC  
Chanute, KS, USA

ISBN 978-3-319-23735-0      ISBN 978-3-319-23736-7 (eBook)  
DOI 10.1007/978-3-319-23736-7

Library of Congress Control Number: 2016946372

© Springer International Publishing Switzerland 2017

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made.

Printed on acid-free paper

This Springer imprint is published by Springer Nature  
The registered company is Springer International Publishing AG Switzerland

## Foreword by L'Abate

Can a profession devoted to helping people make positive behavior changes, in turn, modify its own clinical practices? If the stages of change model can be applied to a profession, and the mental health profession in particular, the change is now taking place as witnessed in this new volume. Contributors to this volume who have meditated, processed, and thought about incorporating Internet technology in their work demonstrate here how they eventually had no choice but to embrace the Internet as the next medium of psychological help and healing in this century. The diverse paths these varied professionals took toward their use of technology highlight the many individual ways technology may be used to benefit people needing services.

In the 1970s under the influence of the late attorney, Dan McDougald, I started to use programmed writing as a way to change and improve behavior, especially with inmates. When I gave then a workshop about distance writing at a GPA annual meeting, only three colleagues attended and two left after my introductory remarks. At the time, the idea that you could change behavior through distance writing was anathema to all those trained in the primacy of personal presence. In fact, many of my GPA colleagues began to avoid me. I had experimental results from my own students and my laboratory to support this position, but evidence is not always convincing in the face of strong traditional beliefs.

With the many varied contributions of this volume, I do feel a sense of vindication. However, I feel we are still only at the beginning of a great change. In 1976 I argued that only structured, replicable interventions based on writing would result in an empirically based profession of clinical psychology. In my opinion, the clinical psychology profession has continued to practice as art rather than as an empirical science. This, in spite of the more recent movement toward evidence-based interventions. Here the basic steps to pre-post- and follow-up evaluation were completely forgotten: process was valued above outcome. However, as long as these empirically based interventions were based on face-to-face talk, there was no way to replicate them.

The clinical mental health professions, lacking any organizational limits, have continued to practice as artists, no initial baseline, no post-intervention evaluation,

and no follow-up. Gaudio and Scott Lilienfeld (reference here please) in their writings have emphasized how the public tends to view clinicians as artists rather than professionals. The medical model has been cited as the underlying rationale for this kind of practice, to urge defensive rebuttals to possible criticisms. The idea that a referral should be linked with a concrete and specific targeted treatment was frowned upon. Talk and personal presence seemed to be the magic formula without a specific strategy. Some would say that clinical success was measured by how many professionals were financially successful.

The contributors to this volume appear at a crucial point in the evolution from auditory-verbal psychotherapies to visually digital remote writing interventions. They reflect a question that faces the twenty-first century clinician as to whether they are going to use replicable, targeted programmed remote interactive interventions that have been validated with pre-post- and follow-up client by single client. Will they continue practicing online in the same manner as face-to-face psychotherapists, without internal or external controls? Or will they practice (as psychologists were trained to do) in a replicable and scientific manner that provides a baseline, a targeted treatment, and follow-up? Anything short of these three steps departs from the scientific realm and enters the artistic realm. If it is not replicable in evaluation and in treatment, it remains in the artistic realm. do not need to demonstrate the validity of their productions. The last time I counted, there were 23 different types of psychotherapy where eclecticism prevented the need for a model responsible for change. But with the use of technology, as reflected in the experiences of this book, we are on the brink of a newer, more precise and scientific approach to helping those with psychological problems.

Georgia State University  
Atlanta, GA, USA

Luciano L'Abate

# Foreword by Zimbardo

I remember vividly the very first time I became aware of how technology could transform my teaching in dramatic ways. I have taught large lecture classes at different universities and realized that a teacher in a large auditorium must become a performer. That means going well beyond simply delivering information, but also to captivate, motivate, and inspire students to want to know more about psychology and life. But at a simple level, these grand themes get reduced to getting the students to attend to what you are saying and showing, to hold that attention for nearly an hour, and also from time to time, to divert it from one topic to another.

I also always wanted to make my class unique and memorable among all the others that students were taking. To do so I relied upon technologies of the time: I began my class with warm-up music, played through a CD player connected to big speakers; presented the outline of my lecture on an overhead transparency; showed 60–100 slides on the carousel slide projector; and showed 16 mm films on a separate film projector. In addition, I also would regularly do class demonstrations and many experiments.

One day, in the middle of teaching a lecture on mental illness and its treatment, a student in the front row began to giggle loudly. I tried to simply stare her down to stop, which stifled the sound, but not the negative headshaking. I could not understand what was funny about some of the tragic cases I was presenting of severe mental illness. I asked her to remain after class, which she did, and to explain what was so funny.

“*You* are funny, running around the stage like a madman turning one device after another, on and off, into the audience to start the film, back to overhead transparency, reveal revealing line by line moving a piece of cardboard marker!”

I asked her: “How else is it possible to operate all those AV-devices, without doing what I was doing, and have been doing for years?”

“DIGITIZE.”

“What does that mean,” I asked puzzled.

She, Cindy Wang, asked me to let her demonstrate how to do so, rather than try to explain. She then asked me to give her all my AV materials. I reluctantly shared

them, but was open to any new gimmick that might make my teaching better and easier.

The next day Cindy came to my office and exchanged the two slide trays, music CD, overhead transparency, and 16 mm film reel for one little disk, something called a DVD. She had somehow transferred all that analog information and input into a digital format that could be burned to a disk, which could be all played through a computer—at one station with no frantic antics. It was sheer magic. Of course, I hired her as my tech TA for the next few years, and together we reprogrammed my class lectures and also my research-colloquium lectures. My life got easier, and my lectures became “dazzling” as I learned how to use PowerPoint, Keynote, and now Prezi performance programs for combining audio, video, and information.

In my next class lecture following the one on mental illness, I was discussing different forms of therapy and raised the issue of various barriers and obstacles that prevented someone who needed help to actually go to a therapist’s office for the therapy he or she had available for clients. I had started the first therapy center in the world at Stanford University focused entirely on treating extremely shy people. However, many shy people were unable to call our office phone to make an initial appointment, so we had to provide a mailing address in order for some of them to do that. That experience sensitized me to the many reasons potential clients do not become actual clients. Among them are living in a rural or remote area, lack of transportation, lack of sufficient funds to pay for the service, language barriers, and appointment timing issues, such as can’t take off from work during daytime office hours, among others.

So how can these barriers be converted to challenges that can be adequately handled by technology? If potential clients simply had access to a computer, iPad, or smartphone, they cannot only make appointments, but the therapeutic session itself would be available on those services. Thinking in this way is the equivalent to my earlier lesson to simply “digitize.” This is such a simple idea but one with enormous positive consequences. Fortunately, many professionals in mental health domains now have available such services provided by the wedding of information technology with the future-oriented thinking of the editors of this unique volume, along with its many talented contributors.

The bottomline of my introduction is to alert you, the reader, along with all professionals with mental health degrees about the revolution that is happening in the world of telehealth. Why should you care?

First, there will be ample and rewarding employment in the information technology (IT) industry. Four introductory chapters discuss the importance of technology and what’s going on that impacts behavioral and mental health. They focus on healthcare reform, legal and regulatory changes, education, and mental health. These introductory chapters are followed by 30–35 short chapters each written by educators, counselors, or psychologists who started out in behavioral health and now works in somewhere in this new tech sector.



From my perspective, it is not only my colleagues in psychology that I want to alert about this exciting new adventure so they can be in the forefront of this movement, but all behavioral scientists should know about and appreciate fully this revolution that combines the wisdom of ages of effective therapies with new technologies that hold the promise of delivering these strategies to so many more people whose lives can be enhanced by such easy and always available treatment options.

Stanford University

Philip Zimbardo, Ph.D.

# Preface

As dreamers who know they are dreaming, most of us realize that we are in the midst of unprecedented change, even as we engage in the minutia of everyday life. Relatively mundane tasks such as buying our groceries or pumping our gas are now often dependent on technology. Sleek, hip, and oh-so-convenient, our mobile phones bring a world of computing to our hip pockets.

Our youth have adapted to this change in ways that leave many of us in awe. Young people, even very young people, now have the capacity to dazzle and amaze us with their technical prowess. They reverse the teacher-student roles quietly, as they help us untangle our email or bring our PowerPoints to life with video and audio effects that flip and whiz. Professors cannot teach without being aware that any student can take a picture of the professor's every gesture, facial expression or body stance at any time, to post YouTube with a particularly humorous or scathing comment. For those in the behavioral health field, it is apparent that technology increasingly offers new opportunities for delivering professional services. However, these opportunities, no matter how promising, remain elusive to many. This is uncharted territory, and how and where to begin or where to go can be a daunting experience.

Welcome to the future. This book on technology in behavioral health aims to provide real insights into how one can envision a career that is fully integrated with the technological environment. It is intended to inspire both graduate students and experienced behavioral and mental health professionals by offering perspectives on emerging, nontraditional career paths that derive from the current technology revolution. Based on personal histories, it illustrates how some professionals have successfully embraced technology to the benefit of their careers and their clients' health. It is readily apparent that, for many of our chapter authors, inspiration and the excitement of exploration have led to new ways of contributing to our respective fields. Themes of rigorous discipline, adversity, ingenuity, wisdom, and plain good luck are evident through various age groups, disciplines, employment settings, and continents represented by our authors. From young and old; from hospital adminis-

trators, physicians, lawyers, and psychiatrists to social workers, psychologists, nurses, counselors, and in between; from hospitals to universities; from private and group practices to corporate settings; and from various countries, our authors were all eager to share their stories of carving a personal career path by embracing new technology.

They are a new breed of behavioral and mental health professionals who can serve as models who point the way for others to follow. While fascinating and often engrossing, the specifics of the stories you will read in this book are *not the way*. Rather, the editors of this text encourage you to look beyond the individual stories of the chapter authors whose stories are offered. You are encouraged to consider the experiences described herein to help you to plot your own path toward your technology-related career and professional goals. Although it can be challenging to adapt to the emerging 21st Century landscape, behavioral health professionals are optimally equipped for engaging in change rather than just theorizing, lecturing, researching or guiding others to weather such difficult processes. Luckily for you, the many different authors of this book's chapters have made unprecedented leaps of faith to get to where they are now. As a reader then, you are in the fortunate position to benefit from an inside glimpse of their successes, failures and words of wisdom regarding how to get from a behavioral health degree to a satisfying career in a technology-related field.

Five introductory chapters were invited to provide a real-world, practical context for the individual stories of the pioneering adventurers whose experiences are depicted in the main body of this book. The five chapters defining the perimeter of the area include general advances in the age of health care reform; technology-related healthcare law; behavioral technology professional education and training; integrated healthcare; and technology overuse and gaming disorders.

The subsequent chapter authors then offer their personal accounts of how they are using different technologies in their work, taking sometimes unique and often serendipitous routes to reach their sometimes undefined goals. They include thoughtful evaluations of their decisions related to immersing themselves in technology in lieu of "settling" for traditional behavioral health care careers. Readers will note that the authors' training and experiences vary considerably, as do their choices related to which technology to adopt, or develop, or research.

At identifiable points, their divergence from traditional formal training backgrounds becomes palpable. The reader will sense the grit, the resolve and the occasional tears of many authors as they re-count episodes of self-questioning about their futures. The reader will also recoil upon reading of the frequent discouragement and occasionally, mistreatment by traditional colleagues to tried to dissuade the authors from making their "risky" career choices. Yet, these brave explorers persisted courageously, steadfastly, and as if driven to tolerate the disapproval until they met with the success that they knew awaited. Clearly their stories demonstrate that there are many creative and exciting routes to developing personally satisfying and financially successful careers in behavioral health and technology, but that such an explorer must be willing to weather the inevitable storms that are part of the voyage. Hopefully, this anthology of pioneering spirits will excite the reader into plotting his or her own course into this exciting new world.

This book then, is a testimony to professionals in the behavioral fields as they adapt to worldwide economic forces that are creating new challenges and new opportunities. A willingness to take risks, seek or develop the needed training, try and fail only to try again, and to create their own community are common characteristics of this assembly of creative and persistent explorers. Perseverance is illustrated in repeated creative manifestations of a “can do” and “will do” attitude that will not (and possibly cannot) tolerate attempts at suppression.

Each chapter begins with an inspirational quote that the authors felt relevant to their work. Such quotes are followed by a vignette depicting a “moment in time” during their tech-related day, or an example of someone using their technology. Authors next describe their formal training and work experiences as a backdrop to illustrate from whence they came. So as to more clearly describe how they managed to traverse the chasm between their traditional and nontraditional worlds. Next, they outline some of the perceived pros and cons relevant to their chosen behavioral technology-related work. Lastly, the authors provide references to clearly demonstrate that their work has an evidence base, and is thus replicable. Each chapter is freestanding and can be independently read.

The editors wish to acknowledge and express gratitude to the eminent psychologists, Drs. Luciano L’Abate and Philip Zimbardo, who graciously agreed wrote the book forewords. Both of these mentors have taken the time to express perspectives that are pivotal for the future of behavioral telepractice. Dr. L’Abate’s emphasis on developing and using empirical methods with the use of technology is crucial for establishing a strong evidence base for telepractice. The late Dr. L’Abate has not only been an advocate for the use of technologies for more than two decades, but he has been steadfast in his focused assertion that professionals have a responsibility to develop and follow specific, effective and replicable routes to creating change. The foreword provided by Dr. Zimbardo points to the need to remain humble and open to new ways of delivering the services that many professionals have spent decades perfecting. As he humorously described, much can be learn from the younger generations. Beyond doubt, technological innovation is needed to help the many people who are still unserved or underserved by the professional behavioral health community.

The editors appreciate the time and effort that the chapter authors took in writing about their experiences with technology in a personal rather than academic style. The editors also also thank their families, the Coalition for Technology in Behavioral Science ([www.CTiBS.org](http://www.CTiBS.org)), and Sharon Panulla at Springer Science for their steadfast support and encouragement. Lastly, they thank the many professionals who could not write a chapter for the current book, but who wholeheartedly supported their efforts to offer this compendium of insights to share with the interprofessional community at large.

San Diego, CA, USA  
Dayton, OH, USA  
Chanute, KS, USA

Marlene M. Maheu, PhD  
Kenneth P. Drude, PhD  
Shawna D. Wright, PhD

# Contents

## Part I Introduction

1. **Tackling Changes in Mental Health Practice:  
The Impact of Information-Age Healthcare.....** 3  
Joseph L. Ternullo and Steven E. Locke
2. **The Law of Telemental Health.....** 15  
Joseph McMenamin
3. **Technology: Revolutionizing the Delivery of Health Behavior  
Change Interventions with Integrated Care.....** 41  
Stephen O. Agboola and Kamal Jethwani
4. **Internet Gaming Disorder and Internet Addiction Disorder:  
Future Careers in Research, Education, and Treatment.....** 53  
Andrew P. Doan, Kathryn Yung, Paulette Cazares, and Warren P. Klam
5. **Crisis in the Behavioral Health Classroom: Enhancing Knowledge,  
Skills, and Attitudes in Telehealth Training.....** 63  
Joanne E. Callan, Marlene M. Maheu, and Steven F. Bucky

## Part II Special Topics and Personal Perspectives

6. **Making iCBT Available in Primary Care Settings:  
Bridging the Gap Between Research and Regular Health Care.....** 83  
Kristofer Vernmark
7. **Technology Use in Behavioral Medicine Health.....** 89  
Karen M. Wall
8. **New Adventures in Independent Practice: Leveraging  
Technology to Treat Underserved, Rural Populations  
in Skilled Nursing Facilities .....** 95  
Shawna Wright

**9. Telepsychiatry Takes Teamwork..... 105**  
James R. Varrell and Olivia C. Boyce

**10. Personal Health Records, Patient Portals, and Mental Healthcare .. 115**  
Carolyn Turvey

**11. Work with Behavioral Health Technology ..... 123**  
Jay H. Shore

**12. The Accidental Telepsychologist: Creating Opportunities  
in a Burgeoning Field..... 131**  
Sara Smucker Barnwell

**13. Treating Emotional Consequences of Sexual Assault  
and Domestic Violence via Telehealth ..... 139**  
Sarah Steinmetz and Matt J. Gray

**14. Engaging and Supporting Children and Families:  
Technology-Enhanced Services Research ..... 151**  
Deborah J. Jones

**15. The Application of Technology to an Academic Clinical Practice  
and Career: Evidence-Based Medicine, Telepsychiatry,  
and Distance Education..... 163**  
Donald M. Hilty

**16. Enhancing Mindfulness-Based Cognitive Therapy  
with a Virtual Mindfulness Coach..... 171**  
Eva Hudlicka

**17. Getting Better: How a Client Satisfaction Survey Can Enhance  
Both Your Marketing and Treatment Outcomes..... 183**  
Keely Kolmes

**18. How a Decade of Telemedicine Has Reshaped a Career ..... 189**  
Robert N. Cuyler

**19. Work Smarter, Not Harder: Expanding the Treatment Capacity  
of a University Counseling Center Using Therapist-Assisted  
Online Treatment for Anxiety ..... 197**  
Brian M. Shaw, Geoff Lee, and Sherry Benton

**20. Improving Veterans’ Access to Trauma Services  
Through Clinical Video Telehealth (CVT)..... 205**  
Wayne Roffer

**21. Telemedicine in Genetic Counseling..... 213**  
Susan Landgren

- 22. Clinician to Trainer to Technologist and Consultant:  
The Wild and Wonderful Path eLearning and mHealth ..... 223**  
Marlene Maheu
- 23. From Psychologist to EHR Developer..... 231**  
Susan Litton
- 24. A Psychologist and a Software Developer ..... 239**  
Mark R. McMinn
- 25. Primary Care Psychology in a Military Treatment Facility:  
The Internal Behavioral Health Consultant (IBHC)..... 245**  
Gerald R. Quimby
- 26. Promoting and Evaluating Evidence-Based Telepsychology  
Interventions: Lessons Learned from the University  
of Kentucky Telepsychology Lab ..... 255**  
Robert J. Reese and Norah Chapman
- 27. Virtual Reality Therapy for Treatment of Psychological Disorders.. 263**  
Max M. North and Sarah M. North
- 28. Matching Person and Technology..... 269**  
Marcia Scherer
- 29. Integrating Behavioral Health into Rural Primary Care Clinics  
Utilizing a TeleMental Health Model ..... 277**  
Dawn Sampson and Mindy Mueller
- 30. Walking the Wire: Technologies Across an Academic Career ..... 285**  
Laura Schopp
- 31. Walking the Unmarked Path: On Developing  
an Independent Practice..... 291**  
Thomas J. Kim
- Index..... 299**

# About the Editors

**Marlene Maheu, Ph.D.** Consultant, trainer, author, and researcher, Marlene M. Maheu, Ph.D., is the Executive Director of the *TeleMental Health Institute, Inc.*, where she has overseen the development and delivery of professional training in telemental health via an eLearning platform that serves thousands of clinicians seeking professional training and consultation from more than 39 countries worldwide.

For more than 20 years, Dr. Maheu’s focus has been on the legal and ethical risk management issues related to the use of technologies to better serve behavioral health clients and patients. She has served on a dozen professional association committees and task forces related to establishing standards and guidelines for telehealth. She has written dozens of peer-reviewed articles and is lead author of multiple telehealth textbooks.

Dr. Maheu is a technology developer and lectures internationally on the subject of best practices in the use of various technologies. She is a staunch advocate for technological change to reach more people, reduce healthcare costs, and improve the quality of care via self-help, wireless technologies, and telepractice.

**Kenneth P. Drude, Ph.D.** has a doctorate in counseling psychology from the University of Illinois. His telemental health interests include the ethics, standards, guidelines, policy and regulation of telemental health practice, and interprofessional relations. He chaired an Ohio Psychological Association committee that developed the first psychological association telepsychology guidelines in the United States in 2008. Dr. Drude served on the Ohio Psychological Association governing board for 28 years in various capacities and as editor of *The Ohio Psychologist*. He currently is the president of the Ohio Board of Psychology. He was a member of the Association for State and Provincial Psychology Board’s Telepsychology Task Force that developed an interstate psychology compact. He currently provides outpatient psychological services in a general private practice in Dayton, Ohio.



**Shawna Wright, Ph.D.** is a licensed psychologist in Kansas and Nebraska who works in private practice as a telepsychologist. She obtained her graduate training in clinical psychology from Texas Tech University specializing in child and family treatment. She has worked for over a decade in community mental health in southeastern Kansas as outpatient therapist. In 2011, she completed a comprehensive telemental health certificate training program through the TeleMental Health Institute and initiated a private practice providing telepsychology services to residents of rural nursing facilities. Dr. Wright has a keen interest in working to develop standards, training, and resources to assist psychologists who are interested in telepsychology careers. She is the membership chair for the Coalition for Technology in Behavioral Sciences (CTiBS) and maintains aspirations of sharing her professional experience to help advance professional resources for telepsychology through educational endeavors and consultation.

## About the Authors

**Stephen Agboola, MD, MPH** is a Research Scientist at the Center for Connected Health, Partners Healthcare, and Harvard Medical School. His research is focused on finding innovative strategies to support healthcare delivery by creatively engaging patients, caregivers, and care providers using technology for objective data collection and personalized feedback. He seeks to employ technology to improve access to quality care as well as promote wellness, prevent disease, and limit the complications due to chronic diseases. At the Center for Connected Health, he leads efforts in designing and implementing rigorous research methodologies to evaluate new mobile health interventions in clinical trials.

**Sara Smucker Barnwell, Ph.D.** is a licensed clinical psychologist whose research and clinical interests center on the development and dissemination of empirically based treatments in telehealth. She provides workshops and trainings on a diversity of technology-related topics, including telehealth, ethics in technology use, and others. Dr. Smucker Barnwell also delivers telehealth consultation to large-scale providers (e.g., hospital systems, corporations) as well as individual practitioners. Dr. Smucker Barnwell is a Clinical Professor in the Department of Psychiatry and Behavioral Sciences at the University of Washington and the former Director of Telehealth Training and Education for VA Puget Sound Health Care System. She is the former Chair of the Washington State Psychological Foundation. Dr. Smucker Barnwell served on the Joint APA/ASPPB/APAIT Telepsychology Taskforce. She delivers evidence-based outpatient telehealth and in-person care through independent practice in Seattle, WA.

**Olivia C. Boyce** is a telebehavioral health advocate, a communications professional, and the editor-in-chief of the *InSight Bulletin*, a behavioral health wellness blog.

**Steven Bucky, Ph.D.** is a Founder, Distinguished Professor, and Director of Professional Training at the California School of Professional Psychology at Alliant International University-San Diego. He is also the Chair of the Ethics Committee, has served as Chair of the AIU Faculty Senate, Executive Director of the Addictions Institute, and the Interim Systemwide Dean as well.

Dr. Bucky was on California Psychological Association's ("CPA") Board of Directors from 1996 to 2000, on CPA's Ethics Committee from 1990 to 1997 and 2012 to Present, and President of CPA in 1997. Dr. Bucky has published more than 60 papers, presented at major conventions, and has edited three books. He is a Fellow of the American Psychological Association, the California Psychological Association, and the San Diego Psychological Association.

Dr. Bucky also maintains a private practice that focuses on children, adolescents, families, substance abuse, forensics, and the assessment and treatment of professional and college athletes.

**Joanne E. Callan, Ph.D., A.B.P.P.** who earlier was Dean and then Provost at the California School of Professional Psychology-San Diego, is a Distinguished Professor in both the Clinical Ph.D. and Clinical Psy.D. Programs at CSPP-SD of Alliant International University. She holds a Clinical Associate Professor appointment (Voluntary) in the University of California—San Diego's Department of Psychiatry and is also a Training and Supervising Analyst at the San Diego Psychoanalytic Center. A Diplomate in Clinical Psychology (American Board of Professional Psychology), she was the first Executive Director of the American Psychological Association's Education Directorate. Her presentations and publications focus on professional ethics, professional education and training of psychologists, women's professional issues, and applications of attachment and object relations theories in professional development and practice.

**Norah Chapman, Ph.D.** is an assistant professor at Spalding University in Louisville, Kentucky. Her primary research interests are in evaluating components of psychotherapy process and outcome, both in person and via telepsychology, to develop evidence-based practices that increase the access to and quality of mental healthcare amongst underserved populations.

**Robert N. Cuyler, Ph.D.** is president of Clinical Psychology Consultants Ltd., LLP. His consulting practice focuses on planning, developing, and refining behavioral health telemedicine services. His extensive telemedicine activities have included clinical, public policy, project planning, and business development. Dr. Cuyler previously served as interim chief executive officer of JSA Health, a Houston-based emergency telepsychiatry company. He was senior vice president of Diamond Healthcare and cofounded Heritage Health Services, a behavioral health management company, where he served as COO and clinical director until Heritage was acquired by Diamond. He is author (with Dutch Holland, Ph.D.) of the book *Implementing Telemedicine: Completing Projects on Target on Time on Budget*.

**Andrew P. Doan, M.D., Ph.D.** Andrew P. Doan, Kathryn Yung, Paulette Cazares, and Warren P. Klam work in the US Navy in the Department of Mental Health at the Naval Medical Center in San Diego. They have an interest in how technology, the Internet, and video games affect the mind and behavior in children and adults. Their research is focused on the benefits of these technologies in medicine and behavioral health, as well as why these technologies are objects of abusive behavior in some individuals. Dr. Klam is the director of the Department of Mental Health. Dr. Cazares is the department head at the Substance Abuse Rehabilitation Program at the Naval Medical Center in San Diego. Dr. Doan is the coauthor of *Hooked on Games: The Lure and Cost of Video Game and Internet Addiction*.

**Matt J. Gray, Ph.D.** is a professor of psychology at the University of Wyoming. He is the developer and founder of the Wyoming Telehealth Trauma Treatment Clinic. He trained at the National Crime Victims Research and Treatment Center and the National Center for PTSD. His primary research interests include intimate partner violence and sexual violence treatment and prevention.

**Donald M. Hilty, M.D.** is a scholar in psychiatry, education, faculty development, and telemedicine to rural primary care. He is vice-chair of education, director of Medical Student Education, and a clinical scholar at the USC Keck School of Medicine. His research involves public health, consultation-liaison models, mood disorders, and genomics in underserved medical populations. He is co-investigator of an Agency for Healthcare Quality and Research (AHRQ) randomized controlled trial that compares synchronous and asynchronous telepsychiatry. He is also the former director and developer of the 5-year MD/MPH UC Davis Rural Program in Medical Education. Dr. Hilty's specific educational interests include pedagogy, evaluation, and distance education. Dr. Hilty has authored over 170 articles, chapters, book reviews, and/or books. He has participated in over 100 peer-reviewed presentations as a member of the Association for Academic Psychiatry (AAP), the Academy for Psychosomatic Medicine, the American Telemedicine Association, and the American Psychiatric Association (APA). He chaired or vice-chaired the annual meetings of the APA, AAP, and AAMC scientific program committees. He recently joined the American College of Psychiatry, and he is currently a member of a treatment guideline writing group in a project of the American Psychiatric Association and Institute of Medicine.

**Eva Hudlicka, Ph.D., M.S.W., L.I.C.S.W.** has a dual career in affective computing (Ph.D., Computer Science/Artificial Intelligence; University of Massachusetts-Amherst) and psychotherapy (M.S.W.; Simmons College School of Social Work). She is currently a psychotherapist in private practice in Western Massachusetts and a Principal Scientist and President of Psychometrix Associates in Amherst, MA. She is also a Visiting Lecturer at the School of Computer and Information Sciences at the University of Massachusetts-Amherst, where she teaches courses in Affective Computing and Human-Computer Interaction. Prior to founding Psychometrix Associates in 1995, she was a Senior Scientist at Bolt Beranek & Newman in

Cambridge, MA. Her interests in telemental health focus on the use of advanced technologies to improve client engagement and outcomes. She has authored over 50 journal and conference papers and numerous book chapters.

**Kamal Jethwani, M.D., M.P.H.** leads the research and program evaluation initiatives at the Center for Connected Health. His research is focused on technology-based models of health delivery and the use of behavior change as a tool for preventive and supportive care in a tertiary healthcare setting. His work at the Center for Connected Health has spanned from designing and implementing clinical trials to leading efforts in predictive modeling using behavioral parameters.

Dr. Jethwani is also responsible for shaping the research roadmap for the Center, leads the evaluation of all on-going programs, and contributes to efforts at program development and scaling. His research has evolved over time to include exploration of newer health delivery models, like employer-based health programs and electronic social network-based programs. Dr. Jethwani is also exploring newer tools to deliver feedback to patients, like simple text message-based platforms, applications for smart phones, etc.

Dr. Jethwani is currently an Assistant in Dermatology at Massachusetts General Hospital and Instructor at Harvard Medical School.

**Deborah Jones, Ph.D.** earned her doctorate in clinical psychology from the University of Georgia, completed her clinical internship at the Brown University Clinical Psychology Training Consortium, and did a postdoctoral fellowship at the University of Pittsburgh. She is currently a Professor in the child and family track of the clinical psychology training program in the Department of Psychology and Neuroscience at the University of North Carolina at Chapel Hill. Dr. Jones' basic and applied research have long focused on understanding variability in risk and resilience in underserved families. This work really sparked Dr. Jones' interest in the capacity for increasingly available innovations in technology to bridge the research-to-practice gap, particularly for families who may need, yet be least likely to have access to and/or benefit from, evidence-based mental healthcare. Dr. Jones' research in this area has been consistently funded by the National Institute of Mental Health and also allows her the added benefit of actively participating in clinical supervision and training, which she enjoys greatly.

**Thomas J. Kim, M.D., M.P.H.** has worked as a telehealth practitioner, developer, educator, investigator, strategist, and advocate. His efforts have focused on collaborative care models, vulnerable populations, disaster preparedness, public policy, and service sustainability and scalability. From academia and government to private industry and nonprofits, Dr. Kim has engaged a wide variety of organizations toward understanding how best to apply technology to healthcare.

Dr. Kim received his BA in philosophy from Georgetown and MD/MPH from Tulane University. Dr. Kim continued at Tulane to complete a combined residency in internal medicine and psychiatry and general medicine fellowship in health services research.

**Keely Kolmes, Psy.D.** is a licensed private practice psychologist in San Francisco. Dr. Kolmes is serving her second term on the Ethics Committee of the California Psychological Association. She is Founder and President of Bay Area Open Minds, a group of over 170 mental health professionals who work with sexual and gender diversity. Dr. Kolmes is coauthor of the fifth revision of Ed Zuckerman's *The Paper Office for the Digital Age*. She is a pioneer in the development of digital ethics for clinicians on social media. Her Social Media Policy has been internationally taught and adapted across health disciplines. She writes, does research, and provides consultation and training on clinical and ethical issues related to social networking and technology. She has published a *New York Times* Op-Ed on the challenge of consumer reviews of mental health services and developed *Getting Better*, a product to help clinicians track treatment outcomes and address client satisfaction on the Internet. Dr. Kolmes has been quoted in the *Washington Post*, *BBC News*, *HuffPost Live*, *Forbes*, and *Fox News*. Website: [www.drk-kolmes.com](http://www.drk-kolmes.com) Twitter: @drkkolmes.

**Geoff Lee, Ph.D.** has a doctorate in counseling psychology from the University of Florida. He is a clinical assistant professor and serves in the role of digital services coordinator at the University of Florida Counseling and Wellness Center. His work focuses on using technology to make mental health resources more accessible for college students. He served as the clinical development lead and clinical coordinator for the Therapist Assisted Online (TAO) treatment developed at the University of Florida. He currently serves as a consultant on the Higher Education Mental Health Alliance (HEMHA) Distance Counseling Guide for colleges and universities.

**Susan C. Litton, Ph.D.** holds degrees in both the mental health and IT fields and is actively engaged with careers in both. In mental health, she's a clinical psychologist in private practice. As an IT professional, she's the creator and driving force behind PSYBooks ([www.psybooks.com](http://www.psybooks.com)), an online practice management system (EHR) and telemental health portal for mental health professionals.

**Steven Locke, M.D.** is a thought leader in the field of behavioral informatics and primary care. Dr. Locke is a founder and Chief Medical Officer of iHope Network, a Boston-based behavioral telehealth company that uses clinician-delivered and technology-guided Cognitive Behavioral Therapy (CBT) via smartphone and secure video therapy to integrate behavioral health into primary care. Dr. Locke also is a primary care psychiatrist both in private practice and at the Beth Israel Deaconess Medical Center where he is a member of the primary care telepsychiatry consulting team. He is Associate Clinical Professor of Psychiatry at Harvard Medical School, a Distinguished Life Fellow of the American Psychiatric Association, a Life Fellow of the Society of Behavioral Medicine, and a Past-President of the American Psychosomatic Society. Dr. Locke serves on the editorial boards of *Cyberpsychology, Behavior, and Social Networking*, the *American Journal of Health Promotion*, and *Population Health Management*.

**Joseph P. (“Joe”) McMenam, M.D., J.D.** is a physician-attorney in Richmond, Virginia. Both his law practice and his consultancy concentrate on and benefit from his 20 years’ experience in telemedicine. Joe advises institutional and individual telehealth service providers, remote monitoring services, trade associations, telehealth platform companies, private equity firms, and telecoms on a broad array of medico-legal questions arising from distance care. He also publishes extensively and lectures widely on these and related matters.

Before being admitted to the Bar in 1985, Joe had been a university-trained internist and a practicing emergency physician. For many years he represented an array of healthcare clients at a large international law firm before striking out on his own in 2013 to found MDJD, PLC, and McMenam Law Offices, PLLC.

Joe presently serves as general counsel to the Virginia Telemedicine Network. He is an associate professor of Legal Medicine at Virginia Commonwealth University, and a member of the Board of Advisors of the Medical Information Technology Law Report and of the Legal Resource Team of CTeL, the Center for Telemedicine and eHealth Law. He is board certified in Legal Medicine and a Fellow of the American College of Legal Medicine.

**Mark R. McMinn, Ph.D.** is professor of clinical psychology at George Fox University. He is a licensed psychologist in Oregon; a fellow and former president of APA’s Division 36, Society for the Psychology of Religion and Spirituality; and board certified in clinical psychology through the American Board of Professional Psychology. His research interests include the integration of psychology and Christianity, positive psychology, clergy-psychology collaboration, and technology in psychological practice.

**Mindy Mueller, Psy.D.** received her Psy.D. in Clinical Psychology from Antioch New England Graduate School, her Master’s in Counseling Psychology at Boston College, and her Master’s in Child and Family Development at Syracuse University. She is a licensed psychologist in California and has been working for the past 8 years on Catalina Island as a Program Manager, Clinical Supervisor, and therapist for The Guidance Center, a multidisciplinary community mental health center. Dr. Mueller has an extensive background in providing mental health services to children, adolescents, and adults within a variety of settings. She also has a background in evaluation and research focusing on the provision of mental health in rural communities and the development of community coalitions. Since 2009, Dr. Mueller has devoted her energy and expertise to developing sustainable telemental health programs in rural areas with her business partner, Dawn Sampson, of TeleConnect Therapies.

**Max M. North, Ph.D.** is a tenured professor of management information systems in the Business Administration Department. He has been teaching, conducting research, and providing community service for Computer Science and Information Systems Departments at higher education institutions for more than 20 years. He holds a master’s degree in computer science with a concentration in management

information systems and a Ph.D. in counseling psychology/psychological services with concentration in cognitive and behavior sciences. Dr. Max North has been successfully involved in the research of human-computer interaction/interface, information security and ethics awareness, and virtual reality technology. Dr. Max North is the director of the [Visualization and Simulation Research Center](#). Additionally, Dr. Max North has several published books, book chapters, and a number of technical referred scholarly articles. He has served as principal/co-principal investigator on a number of research grants sponsored by the Boeing Company, the US Army Research Laboratory, the National Science Foundation, and the National Security Agency. Dr. Max North's major contribution to the scientific community is his discovery and continuous research activities in the innovative area of virtual reality technology, which have received international attention and coverage in the scientific community and popular media.

**Sarah M. North, Ph.D.** is a faculty member of the Computer Science Department at Kennesaw State University. Dr. Sarah North has been teaching, conducting research, and providing community service in computing for over 20 years at higher education institutions. Dr. Sarah North's graduate work is on computer science with a concentration in programming languages, while her doctoral work is on educational technology and leadership and administration with a concentration in information cyber technology. Dr. Sarah North has been successfully involved in the research in the areas of information security education, human-computer interaction, cognitive science, and virtual reality therapy/technology. Additionally, Dr. Sarah North has several book chapters and a number of technical referred scholarly articles nationally and internationally. She also served as principal/co-principal investigator on a number of research grants sponsored by the Boeing Company, National Science Foundation, and National Security Agency.

**Gerald R. Quimby, Psy.D., M.A., M.S.** holds a bachelor's degree in computer science, master's degrees in counseling and in psychopharmacology, and a doctorate in clinical psychology. He completed a 2-year health psychology fellowship at Tripler Army Medical Center and is currently a behavioral health consultant in the family practice clinic at the Naval Health Clinic at Pearl Harbor. Dr. Quimby is also on the faculty of the American School of Professional Psychology. He has been active in telemental health issues since 1996. Recently, he was recognized by the Navy Bureau of Medicine and Surgery for his database which identifies diagnostic trends and program needs used throughout the Navy healthcare clinics.

**Robert J. Reese, Ph.D.** completed his doctoral degree in counseling psychology at Texas A&M University. He is a professor and chair in the Department of Educational, School, and Counseling psychology at the University of Kentucky. Dr. Reese's research interests are psychotherapy process/outcome, psychotherapy supervision and training, and telehealth. His current research is focused on investigating the process of client feedback and the use of technology to provide psychological services to underserved populations. He is a licensed psychologist in Kentucky.



**Wayne Roffer, Psy.D.** is a licensed psychologist in Pennsylvania, working at the Lebanon VA Medical Center, Lebanon, PA. Dr. Roffer specializes in the treatment of comorbid post-traumatic stress disorder (PTSD) and substance use disorders (SUDs). Dr. Roffer has completed Department of Veterans Affairs' trainings in cognitive processing therapy (CPT) and prolonged exposure therapy (PE) for PTSD, as well as clinical video telehealth (CVT). Dr. Roffer is proficient in the delivery of CVT and provides education and consultation to other behavioral health professionals in the areas of telemental health clinical practice, HIPAA, and telepsychology legal/ethical issues. In his spare time, he enjoys outdoor activities such as camping, hiking, and biking.

After graduation from Middlebury College in 1982, Susan Landgren's first professional activities were as a science educator. In 2000, following a year as a technician in a molecular genetics laboratory, Susan entered the master of science program in genetic counseling at Brandeis University. Since obtaining her M.S. degree in 2002, Susan has provided genetic counseling services from Billings, Montana. She was certified by the American Board of Genetic Counselors in 2005. Many of her patients live in Wyoming and North and South Dakota. In 2009, Susan initiated a program providing genetic counseling services to patients over the Eastern Montana Telemedicine Network, which coordinates its services with neighboring systems. That effort was supported by a generous grant from the Mountain States Genetics Regional Collaborative.

**Dawn Sampson, M.S.W., L.C.S.W.** received her Master of Social Work degree from the University of Southern California and is licensed as a Clinical Social Worker in California. Dawn was the Director of Social Services for the Catalina Island Medical Center, a rural Critical Access Hospital, for 26 years. During this time she obtained grants and developed programs to serve the community, including a successful telehealth program. In 2009 Dawn and Dr. Mindy Mueller started a partnership, TeleConnect Therapies, which provides telemental health services to clinics in rural areas throughout California. They have presented on telehealth and telemental health topics for the American Psychological Association, the California Association of Rural Health Clinics, the California State Rural Health Association, the California Telehealth Network, and the TeleMental Health Institute. Over the course of her career, Dawn has provided clinical therapy services to individuals, groups, and families, in areas both urban and rural, and has been providing clinical telemental health services to patients in rural clinics for the past 7 years.

**Marcia Scherer, Ph.D., M.P.H., F.A.C.R.M.** is a rehabilitation psychologist and founding president of the Institute for Matching Person & Technology. She is also a professor of physical medicine and rehabilitation at the University of Rochester Medical Center and project director at Burton Blatt Institute in Syracuse University. She is a past member of the National Advisory Board on Medical Rehabilitation Research of the National Institutes of Health and is editor of the journal *Disability and Rehabilitation: Assistive Technology*. She has authored, edited, or coedited ten books. She has published over 60 articles on disability and rehabilitation in

peer-reviewed scientific journals and over 25 book chapters; she has been cited over 2500 times by others.

**Laura Schopp, Ph.D., A.B.P.P.** is a board-certified clinical neuropsychologist and Professor in the Department of Health Psychology at the University of Missouri. She has directed over \$5 M in federal grants as Principal or Co-Principal Investigator, largely in health services delivery for primary, secondary, and tertiary prevention using a variety of telehealth strategies. She served on and chaired the American Psychological Association (APA) Committee on Rural Health, as APA's representative to the Health Resources and Services Administration's federal rural mental health shortage area designation committee, as Co-Chair of APA's Early Career Presidential Task Force, as a member of the APA Telehealth Implementation Work Group, and chaired the Scientific Affairs Committee of the Missouri Psychological Association. She has provided expert testimony to the Missouri legislature on the use of telehealth strategies to meet the needs of rural patients with neurologic disorders.

**Brian M. Shaw, Ph.D.** is a clinical assistant professor in the Counseling and Wellness Center at the University of Florida. He holds a doctorate in Counselor Education from Old Dominion University. He is a Licensed Professional Counselor in the state of Georgia and a Licensed Mental Health Counselor in the state of Florida. In his current position, Dr. Shaw provides counseling services for college students and supervision to counselors in training. Drawing on his prior training and experience as a software engineer, Dr. Shaw enjoys exploring applications for the use of technology to enhance the quality and delivery of counseling services. He was involved in the development of the first therapist-assisted online counseling intervention for college students.

**Jay Shore, M.D., M.P.H.** is the Native Domain Lead for the VA Office of Rural Health's Veterans Rural Health Resource Center, Salt Lake City. He is an Associate Professor of Psychiatry at the University of Colorado, Anschutz Medical Campus, Department of Psychiatry and Centers for American Indian and Alaska Native Health. He also serves as Director of Telemedicine at the University's Helen and Arthur E Johnson Depression Center. Dr. Shore's career has focused on telepsychiatry creating, implementing, and administering services and conducting evaluation and research with federal, state, university, and tribal organizations. His work has centered around increasing access and quality of care for native, military, and rural populations. He has served in leadership positions for telepsychiatry in the American Psychiatric Association and American Telemedicine Association.

**Sarah Steinmetz, M.S.** is a doctoral student in clinical psychology at the University of Wyoming. Her research interests include sexual violence prevention and treatment, intimate partner violence, and post-traumatic stress and adjustment. She is presently the lead therapist for the Wyoming Telehealth Trauma Treatment Clinic which is funded with generous support from the Verizon Foundation.

**Joseph Ternullo, J.D., M.P.H.** is chief operating officer of Pulse Inframe, a global healthcare data analytics company, and president-elect of the Society for Participatory Medicine. Mr. Ternullo is also a senior advisor to the Consulate of Canada—Boston. Previously, Mr. Ternullo served as associate director of Partners HealthCare's Center for Connected Health. He founded the Connected Health Symposium, a prominent two-day international annual event, and co-founded Continua Health Alliance, a standards and interoperability organization now associated with HIMSS. Mr. Ternullo has sat on several boards and on HHS's American Health Information Community Chronic Care Workgroup and a US Commerce Department International Trade Advisory Committee. An attorney and certified public accountant, Mr. Ternullo holds degrees from Boston College, Bentley University, Boston University School of Law, and Harvard T.H. Chan School of Public Health.

**Carolyn Turvey, Ph.D.** received her Ph.D. in Clinical Psychology from Yale University in 1994 and her M.S. in Epidemiology from the Harvard School of Public Health in 1996. She is a Research Health Scientist at the Iowa City VA Health Care System and a Professor in the Department of Psychiatry at the University of Iowa. Since 2000, Dr. Turvey has conducted clinical trials, validity studies, and usability studies of psychological interventions delivered through technology ranging from telephone-based psychotherapies to the use of interactive voice response to screen for depression in Medicaid populations. Since 2008, Dr. Turvey has been interested in personal health records and their effectiveness in promoting health while reducing cost. She is currently conducting a nationwide, multi-site study that trains veterans to use the Blue Button feature of My HealtheVet to share health information with their non-VA providers.

**James R. Varrell, M.D.** is the founder and medical director of the CFG Health Network and InSight Telepsychiatry. Dr. Varrell is American Board certified in psychiatry and neurology and certified by the American Academy of Child and Adolescent Psychiatry with a specialty in autism. Fifteen years ago, Dr. Varrell provided the nation's first commitment via telepsychiatry. He has since been one of the nation's top advocates for the appropriate use of telepsychiatry. Dr. Varrell regularly educates policy makers and the medical community on telepsychiatry best practices. Today, Dr. Varrell still serves consumers via telepsychiatry and oversees 200+ prescribers who treat consumers in 19 states.

**Kristofer Vernmark** is a clinical psychologist and a Ph.D. student. He has been specializing in Internet-based treatment since 2004 doing research, educating and supervising Internet therapists, creating CBT/ACT treatment programs for online use, and helping the healthcare sector implement those programs into primary care settings.

Mr. Vernmark is the author of the first book in Swedish on Internet therapy (*Internetbehandling med KBT—en praktisk handbok*). He is also the published author of the first randomized controlled study on CBT-based email therapy.

Mr. Vernmark is conducting his research at Linköping University where he investigates the effectiveness of different treatment modalities, and the role of alliance, when delivering online treatment for depression. He is the business area manager of digital psychology in the private company Psykologpartners that delivers several services in the psychology market. At Psykologpartners he is involved in large-scale implementation projects, assisting Swedish county councils in the process of making Internet-based CBT/ACT an integrated part of their regular care.

**Karen Wall, Ed.D., R.N.-B.C.** has a doctorate in counseling psychology from Argosy University and a bachelors in nursing from York College of Pennsylvania. She is a psychiatric-mental health nurse with the VA, in the role of Dementia Care Coordinator. Her telemental health interests include competencies, app review, interdisciplinary standards development, application of technology, and mobile apps in the VA and with the elderly. She served on the steering committee, app review team, and competency task force for the Telemental Health Technology and the Coalition for Technology in Behavioral Science. Dr. Wall serves as the co-chair of the VA Palo Alto Dementia Committee and on the VA Office of Nursing Service Geriatric Field Advisory Committee. She has a private practice under supervision as a Marriage and Family Therapy Registered Intern in San Leandro, CA. She has used mobile apps extensively in the acute inpatient psychiatric setting with veterans experiencing various psychiatric illness, including PTSD, depression, anxiety, and cognitive and memory care.

**Part I**  
**Introduction**

# Chapter 1

## Tackling Changes in Mental Health Practice: The Impact of Information-Age Healthcare

Joseph L. Ternullo and Steven E. Locke

*“I slept and dreamt that life was joy. I awoke and saw that life was service. I acted and behold, service was joy.”*

—*Rabindranath Tagore, the first Asian to receive the Nobel Prize in Literature (1913).*

Wherever you are in your journey, a career focused on mental health draws upon the noblest of human instincts—serving others, relieving suffering, rendering compassionate care, and pursuing knowledge. The field is dynamic and, especially now, for reasons summarized in this chapter, change is occurring rapidly. Employment opportunities are expanding and projected to outpace those of other fields. With the advent of a plethora of affordable and reliable enabling technologies coupled with a rapidly evolving regulatory landscape, traditional boundaries to practice are falling and brand-new electronic avenues of care are opening. For those seeking enriching and high-impact careers, there is no better time to pursue a career in the mental health professions. Cutting across all aspects of humanity, the profession draws upon the tension and complexities of our contemporary world and increasingly incorporates elements of technical savvy, team collaboration, and continuous learning.

This chapter summarizes the mental health marketplace dimensions and regulatory landscape, explores the evolution of enabling technologies and the changing nature of care, and identifies barriers to telemental health and career trends and

---

J.L. Ternullo, J.D., M.P.H. (✉)

Chief Operating Officer of Pulse Inframe, 1377 Main St., Lynnfield, MA 1940, USA

e-mail: [jternullo@post.harvard.edu](mailto:jternullo@post.harvard.edu)

S.E. Locke, M.D.

iHope Network, Inc., Wenham, MA, USA

Primary Care Telepsychiatry Service, Beth Isreal Deaconess Health Care, Boston, MA, USA

Harvard Medical School, Boston, MA, USA

e-mail: [slockemd@verizon.net](mailto:slockemd@verizon.net)