terms—the positive and deleterious effects of social forces and factors in the development and evolution of conditions that are behaviorally and emotionally based. Like heart disease 50 years ago, we do not need to have absolute certainty about the mechanism of action to begin to test and implement essential, broadly targeted preventive interventions.

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Solving the Geriatric Mental Health Crisis in the 21st Century

Eric J. Lenze, MD

There are too many of us and we are all too far apart.
Kurt Vonnegut, *Welcome to the Monkey House*, 1968[1]

We are in the midst of an unprecedented demographic trend: we are aging. By 2050, the population aged 65 years and older in the United States will be 84 million. While there are many positive societal aspects to this trend (eg, violence and sociopathy will decrease), health care needs, including mental health, will increase. The 2012 Institute of Medicine report *The Mental Health and Substance Abuse Workforce for Older Adults: In Whose Hands?* highlights the unfolding crisis of our health care system lacking the capacity to help a growing elderly population in which 1 in 5 individuals has a mental disorder.[2] An early taste of this crisis is the large and growing number of older adults who are given benzodiazepines for anxiety and insomnia.[3] These sedative anxiolytics cause cognitive, motoric, and functional impairments in older adults; however, it is this very same demographic receiving a skyrocketing number of benzodiazepine prescriptions, particularly in rural America where mental health access is poorest. It is far better to treat the mental disorder than to give sedatives and settle for deleterious (and expensive) consequences, such as hip fracture, accelerated dementia, and functional decline. We need geriatric mental health treatments packaged in modern technology to extend their reach while retaining effectiveness.

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It is for this reason that the findings of the trial reported by Brenes and colleagues[4] in this issue of *JAMA Psychiatry*, "Telephone-Delivered Cognitive Behavioral Therapy and Nondirective Supportive Therapy for Rural Older Adults With Generalized Anxiety Disorder: A Randomized Clinical Trial," are so important. To understand why, it is essential to know the evidence base for geriatric generalized anxiety disorder treatment. One of the rationales for benzodiazepine use in this age group has been the absence of available evidence-based psychosocial strategies. The evidence base consists mainly of a few trials funded by the National Institute of Mental Health together with supplemental funds from private sources. In summary, antidepressants, particularly serotonin reuptake inhibitors or selective serotonin reuptake inhibitors, cognitive-behavioral therapy (CBT), and their combination are efficacious in short-term as well as long-term treatment (ie, as maintenance therapy to prevent relapse).[5-7]

The trial by Brenes and colleagues[4] adds considerably to our knowledge base in this area by asking the question of whether CBT is effective for generalized anxiety disorder when provided in a portable telephone-administered format to rural older adults. Brenes et al[4] found that approximately 9 telephone-administered CBT treatments given by graduate- or doctoral-level therapists reduced pathological worry to a greater extent than an equivalent amount of supportive therapy, resulting in a response rate of 72% vs 43%. At a randomized sample of 141, this is one of the largest psychotherapy studies in older adults and, to my knowledge, the largest in geriatric

anxiety disorders. Thus, the effectiveness findings alone are noteworthy because they close the book on the lingering question of whether CBT is effective in anxious older adults.

What are the study's implications for the mobile health age? Brenes and colleagues[4] answer several fundamental questions about mobile behavioral health in older adults with mental disorders. First, does mobile technology mean that rural older adults are doomed to subpar mental health treatment? The answer is no; older adults fared at least as well in this study as in prior studies of in-person CBT for geriatric generalized anxiety disorder. Second, is a mobile intervention feasible? The answer is yes; almost three-quarters of randomized participants completed at least 9 sessions of CBT, dropout from the study was relatively low, and client satisfaction was high. Third, and perhaps most importantly for researchers, is it possible to do a mobile behavioral intervention randomized clinical trial in older adults? Brenes and colleagues[4] answer yes but with the following caveat: they randomized 141 older adults with generalized anxiety disorder in 34 months; however, this fell short of their goal of N = 176. This is not the thousands recruited touted in recent Apple ResearchKit headlines; still, it is a substantial success by current psychotherapy clinical trial standards.

What is the relevance of telephone-based therapy in the age of the Internet, smartphones, tablets, and smartwatches? Telephone-based therapy overcomes issues of reach owing to transportation; however, it is just as time-intensive as in-person therapy. Doing the demographic math, it seems that we must move toward more nonconsumable (ie, computerized) interventions to fill the gap between consumer need and provider availability. While Brenes and colleagues[4] have answered some key feasibility questions for mobile behavioral interventions, there will be many others that must be addressed to ensure that older adults with mental illness are not left behind in the mobile health revolution.

Therefore, we are in the midst of the following 2 unprecedented trends: the aging of the population and the transformation of everything in our lives by mobile technology. These 2 trends are inextricably linked in the area of geriatric mental health and our search for better, more effective treatments with greater reach. It has been argued that mobile technology will allow our field to accelerate behavioral treatment development by improving the quality of data collected and allowing for rapid transitions through intervention development stages (from mechanism to dissemination).[8] If so, our behavioral treatments and the clinical trials that test them will be utterly different in 10 years. Most in our field will welcome such disruptive change after a relatively stagnant period of mental health clinical trials research. With such promise, is it overly optimistic to say that there are not too many of us and we are not too far apart?

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