# Enhancing Standards and Principles in Digital Mental Health With Recovery-Focused Guidelines for Mobile, Online, and Remote Monitoring Technologies

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Before the 1970s, the notion that people diagnosed as having a mental health condition could manage symptoms and return to work, school, and a full life in the community was not widespread. Through advocacy efforts by people with lived experience of a mental health condition, recovery-focused care has become a fundamental part of mental health service delivery across the globe (1) and is considered a complementary approach to traditional biomedical psychiatric care (2).

Recovery-focused care has received international acceptance from service users (2) and shown benefits in multiple areas, such as hope, quality of life, symptomatology, and functioning (2, 3).With the advent of recovery-focused care, the therapeutic relationship has been redesigned to include goals and outcomes that are meaningful to service users, to promote shared decision making, and to help people regain control over their lives. This shift has disrupted the delivery, priorities, and skill sets of established biomedical services. At the same time, digital mental health interventions (including mobile, online, and remote-monitoring interventions) have also transformed mental health care. Services that were once provided only in person at clinical environments are now delivered at any time and in any geographical location.

As leaders in the mental health recovery movement, we believe that digital mental health has emerged as a promising approach to enhance mental health practice and delivery, and we consider ourselves innovators in the study of recovery-focused digital mental health interventions. However, the standards and principles needed for recovery-focused digital mental health research and practice have yet to be defined.

In this Viewpoint, we seek to promote a consensus on how recovery-focused guidelines can be used to enhance the standards and principles for research and practice in digital mental health. Building off existing digital mental health standards and principles in research (4), we provide several recommendations for embedding recovery in digital mental health interventions.

*Digital mental health interventions should embrace multiple dimensions of health.* People with lived experience of a mental health condition commonly present with other difficulties such as health conditions, substance use issues, and lack of social support—all of which affect overall health. Mental health recovery is not a singular task of monitoring and addressing psychiatric symptoms; rather, recovery involves addressing the complex interaction between an individual's biological, psychological, and sociocultural environment—also referred to as "whole health" (5). The World Health Organization's International Classification of Functioning, Disability and Health supports this notion and emphasizes that health is made up of intertwined components, including bodily functions and structures, activities, and participation in the community (5).

Mental health conditions are multidimensional and are influenced by the mind, body, spirit, and community (5). Therefore, we recommend that mental health interventions embrace multiple dimensions of health. Technology has the ability to affect multiple aspects of a persons' health by incorporating personalized digital services. Although this is a complex task, enhancing the ability of digital mental health to affect multiple dimensions of health will require investment in innovative analytical techniques. It will also require recognition that whole health cannot be achieved through technology alone—rather, human connections and participation in the real world (not solely a virtual world) are essential to healing the mind, body, and spirit and developing a sense of community. Partnerships between service users and stakeholders with expertise in diverse fields of study—including engineering, medicine, psychology, public health, anthropology, and social work—will be needed.

*People with lived experience of recovery should participate as equal partners—not just in usability studies.* Disengagement in digital mental health interventions prior to experiencing intervention effects is common—despite advances in user-centered design. User-centered design—i.e., including end users in the development of digital mental health

interventions —is intended to increase usefulness of and satisfaction with technology and, hence, improve engagement with technology. Despite efforts to include people with lived experience of a mental health condition (end users) in the usability testing process, disengagement is still highly common. In a recovery-focused framework, clinicians focus on service users' strengths, and together, in full partnership, they work toward a shared goal (5). Service users also have unique capabilities and strengths that can aid in the development of digital health interventions.

User-centered design methodology alone is not capturing the full potential of service users. Therefore, we recommend that researchers in digital intervention development work in equal partnership with people with lived experience of a mental health condition. Such a partnership may enhance intervention success and promote real-world implementation and population health. Furthermore, service users should be provided equitable pay for their work and be informed about researchers' goals for commercialization of digital mental health interventions. For example, if an academic entrepreneur plans to sell a digital mental health intervention to industry partners, service users should be informed and encouraged to discuss equitable ownership options with the academic institution's technology transfer office. This process demonstrates respect for service users' expert knowledge of the mental health system and their community.

*A framework that allows service users to assess the effectiveness of digital mental health interventions is needed.* There are thousands of digital mental health interventions, yet there are few resources to help service users appraise the quality and utility of these products. The American Psychiatric Association has developed a framework for clinicians and health care organizations to evaluate the effectiveness of a mental health app prior to including it in their clinical practice (https://wwwpsychiatryorg/psychiatrists/practice/mental-health-apps/app-evaluation-model). This framework requires clinicians to make judgments on a person's behalf about risks, privacy, and benefits. Although clinicians hold an essential role in identifying treatments, a recovery-focused framework empowers individuals to make informed decisions for themselves. As such, individuals who wish to use a digital mental health intervention should also have support in being able to evaluate their options and the potential benefits and risks of digital mental health, rather than having to rely on recommendations from clinicians or health care organizations.

To our knowledge, no framework exists for service users to evaluate digital mental health interventions. Because service users have full decision-making authority to participate in all decisions that will affect their lives, we propose creating a framework for service users to assess digital mental health interventions. Cocreating this framework

with service users can assist researchers in aligning the framework with the needs and preferences of people with lived experience of a mental health condition. The framework should be presented in plain language in an effort to make scientific research findings accessible to nonscientists.

*People with lived experience of recovery should be represented on expert groups that set digital mental health standards.* Across the globe, regulatory institutions such as the Food and Drug Administration, the National Health Service, and the National Institutes of Health and Care Excellence are developing regulatory standards around digital mental health interventions. Now is the time to ensure that digital mental health standards and principles are guided by recovery-focused care.

Given these circumstances, our final recommendation is to include service users in developing global standards for digital mental health research and practice. Ad hoc expert groups that guide the development of new standards should include people with lived experience of a mental health condition. Regulatory bodies should train people with lived experience of recovery in digital mental health, how to work alongside administrators, ethical issues in technology interventions, and how to examine technology developers' ability to respond to security breaches and other adverse events.

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