

Behavioral Health and the Future: A Case for Virtual Therapies

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Sandro Galea, MD, MPH, DrPH, a leading expert in mental health effects of mass trauma, chairs the Department of Epidemiology at the Columbia University Mailman School of Public Health. He is also the Chair of the Institute of Medicine Committee on Treatment for Posttraumatic Disorder in Military and Veteran Populations. Albert “Skip” Rizzo, PhD, lead author on the paper which follows this relevant commentary, and I are members of this committee, formed in response to congressional concern over the growing crisis of posttraumatic stress disorder (PTSD) among military service members. The committee was specifically tasked by the Secretary of Defense to consider “the effectiveness of alternative therapies in the treatment of PTSD, including the therapeutic use of animals.” Part I of the committee’s report has been released. Part II will cover more specifics about virtual and other alternative therapies, and will be released in July 2014.

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The nature of warfare has changed, in some respects substantially, over the millennia. One of the hallmarks of the United States’ deployments in Operation Iraqi Freedom and Operation Enduring Freedom has been the dramatically lower proportion of war deaths (compared, for example to those in the Vietnam War) and the commensurate higher proportion of wounded soldiers who survive.¹

This shift is due, at least in part, to improved technology that protects soldiers in the battlefield, and to enhanced medical interventions that can stabilize and quickly transport a wounded soldier to definitive care.

However, despite these advances, our progress in applying technological innovation to help mitigate the psychological wounds of war has been much slower. Our most effective treatments for the sentinel psy-

chological injuries that accompany trauma, particularly posttraumatic stress disorder (PTSD), continue to require repeated sessions of intensive face-to-face contact with clinicians, over many weeks.² While these treatments are effective in a large proportion of patients, they pose challenges to the day-to-day reality of soldiers, either to those deployed and hence far from readily available clinical care, or to the

many who return home but live at a distance from qualified clinicians.

The work summarized by Rizzo and colleagues³ in this issue represents a tremendous effort over the past decade or so, to bridge some of this gap in care by the application of a growing number of technological platforms that provide remote treatments and preventive measures for psychological disorders that can be applied in circumstances that are less structured than typical clinician-patient encounters.

While Rizzo and colleagues wisely describe the next steps in the field's evolution as depending on "enthusiastic vision, good science, and healthy skepticism," they also provide us with enough data and evidence of this field's promise to instill hope and optimism in even the hardest skeptic.

'PROMISING AND EXCITING'

There is much to be said on the topic. In the spirit of commentary, distilling some of the key areas to push forward on this work, I summarize here three particular reasons why the application of virtual (digital) technologies to addressing the psychological wounds of war are particularly promising and exciting, and, in parallel, three central hurdles that these technologies need to overcome.

It has become a truism that we live in a globalized, mobile world, and there is every reason to believe that this trend is inexorable.^{4,5} This mobility upends the paradigm of treatments predicated on stable communities. Technological solutions can help overcome this challenge, either through the provision of consis-

tent treatment by the same provider over digital forms of communication, or through treatments that are delivered virtually, untethered to a fixed provider.

The adoption of virtual therapeutic modalities capitalizes on technologies that are intimately familiar to generations who have grown up in a digital universe. This comfort-level with virtual technologies facilitates the delivery of mental health care to this and future generations of soldiers, who might otherwise let fear of stigmatization prevent them from seeking psycho-therapeutic care.^{6,7}

Perhaps most intriguingly, the ubiquitous existence of portable digital devices introduces the potential for comprehensive prevention of the psychological consequences of trauma. Our ability to minimize the consequences of trauma before they occur is still limited, although there is a small body of literature on attempts to do just this.^{8,9}

One of the sentinel barriers to this is identifying effective ways of delivering psychoeducational messages to those at risk, such as deployed soldiers who are hard to reach "in country". The use of mobile, portable devices to deliver psycho-therapeutic care creates opportunities previously unavailable, and not too long ago, unimaginable.

POTENTIAL BARRIERS

Paralleling these areas of potential are three particularly salient challenges.

First, although these technologies represent — through their accessibility and resonance with younger generations — avenues with great potential, the challenge is in how

to ensure their implementation is systematic and rigorous. While the siren lure of these technologies might lead us to develop and broadly disseminate approaches that "should work", it is an urge we should resist. As Rizzo et al admirably outline, the systematic evolution of evidence-based treatments using novel digital platforms, tested rigorously, stands to revolutionize how we deliver psychological interventions.

Second, the accessibility of these methods, and their adoption across different platforms, creates the potential for multiple versions of particular approaches. This can be a strength, allowing us to adjust to local and specific contexts. It can also, however, diminish the effectiveness of a particular approach through numerous iterations.

While this has always been the case with psychological treatments (ie, any clinician can unsuccessfully adapt an evidence-based approach) it is of particular concern for virtual technologies that are not only readily modifiable but can spread virally in that modified state. Evidence-based systems should be in place to monitor the effectiveness of evolving virtual technologies.

And third, while digital therapies offer the potential to reduce stigma, we run the risk of diminishing the import of the treatment itself if it is too readily conflated with common past-times. Ultimately the intent of these approaches is deadly serious — the mitigation of the consequences of war and the treatment of debilitating psychological disorders. Somehow we need to strike the balance between accessibility and effectiveness.

The promise of these methods makes their emergence one of the most exciting developments in the field in decades. Their inherent challenges make their implementation worth watching. The article by Rizzo and colleagues gives us immense hope that we are on the right track.

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