Online delivery of public health interventions is on the rise and for good reason. Roughly 2.3 billion people across the globe are online [1] and many are using it as a resource for health-related information [2,3]. This has promoted a shift in many consumers from passive recipients to active participants in managing their own health [4,5]. Practitioners have been quick to recognize the promise of the internet as a vehicle for disseminating health-saving messages [6] and studies assessing online interventions have concluded that they work [7-12]. However, what has not been appropriately assessed is the degree to which online interventions reach and influence vulnerable sub-groups, such as those with mental disorders.

The lifetime prevalence of mental disorders is staggeringly high—in the United States, it is estimated that approximately 46% of the population will suffer from a mental disorder in their lifetime [13]. Mental disorders are costly [14], disabling [15], and associated with various adverse health outcomes [16-18] and risky behaviors [19-22]. This places the mentally ill in a disadvantaged position—which is the exact subgroup that many interventions are trying to reach. Public health practitioners who do not consider how this vulnerable group receives and responds to their messages may be inadvertently missing a critical piece of the target audience, therefore compromising the effectiveness of the intervention in reducing the population burden of disease.

The issue of the influence of the internet on mental health has gained recent publicity due to a July 2012 NewswEEK cover story entitled “Is the web driving us mad?” [23] and a slew of critical responses by Time, BBC, The Atlantic Wire, and others [24-27]. While our understanding of the internet’s effects on mental health in the general population is still in its infancy and currently unclear, public health practitioners designing, implementing and evaluating online interventions should be careful to consider how the mentally ill may be differentially exposed to, engaged with, or influenced by online interventions. Particular issues to consider are:

First, individuals of low socioeconomic status are less likely to have access to the internet [28] or have their access shut off due to non-payment of bills (personal communication, Vish Vishwanath, June 2012). Given the association between mental illness and low socioeconomic status [29-32], this suggests that those with mental illness may be less likely to be exposed to or benefit from an online intervention.

Second, the average time spent online is increasing [33] and it is unclear how this influences an individual’s exposure and receptivity to any one health message or intervention, especially within the context of an ever-increasingly crowded online environment. For individuals with attention deficits, anxiety, or depression, it is conceivable that the onslaught of messages delivered online may be attended to or processed differently as compared to individuals without these conditions.

Third, it is well-established that an individual’s level of e-health literacy impacts the benefit derived from health messages online [34-36], and those with mental illness may be more likely to display issues of e-health literacy, particularly because mental illness is associated with lower educational attainment [37,38]. Finally, individuals with psychiatric disorders such as depression, anxiety, ADHD and substance use disorder are more likely to be diagnosed with an emerging condition termed ‘Internet Addiction Disorder’ [39], which is characterized by “excessive or poorly controlled preoccupations, urges, or behaviors regarding computer use and Internet access that lead to impairment or distress” [40]. Although this condition likely impacts only a small percentage of individuals, online health interventions actually may promote or exacerbate a mental health issue in this subgroup rather than help alleviate it.

Online public health interventions offer the benefits of broad reach, low cost, anonymity, and accessibility, and show great promise to reduce population-level rates of disease and disability. Given the high prevalence of mental illness and its known associations with other chronic health conditions and risky behaviors, it is critical that this vulnerable population be appropriately reached, engaged and influenced by these interventions. If not, the effectiveness of public health interventions may be undermined and those individuals most at-risk for poor health outcomes not appropriately considered.

References
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