Behavioral Health Tech Review

National Center for Telehealth & Technology (T2) | t2.health.mil

QUARTERLY NEWS HIGHLIGHTS

MOBILE APPLICATIONS

DISA plan outlines a mobile, cloud-based military

Date: May 14, 2014
Source: By Kevin McCaney at Defense Systems.com
http://defensesystems.com/articles/2014/05/14/disa-5-year-strategic-plan.aspx?admgarea=DS
Description: The Defense Information Systems Agency's latest five-year plan paints a picture of future military operations that reflects current technology and budgetary trends, with a heavy focus on mobility and a secure, interoperable cloud infrastructure. Wired workstations are on the decline, mobile devices are on the rise and biometric identifiers will automatically connect users to any authorized device.

Federal research funding for mHealth is welcome news

Date: May 5, 2014
Source: Judy Motti at FierceMobileHealthcare
http://www.fiercemobilehealthcare.com/story/federal-research-funding-mhealthcare-welcome-news/2014-05-05
Description: The National Institutes of Health recently launched a substantive research effort to propel development of new mHealth tools. The effort is aimed at boosting communication between physicians, patients and providers, and improving patient self-management via new tools that will help patients stick to treatment regimens and recovery requirements.

VIRTUAL APPLICATIONS

'Live Synthetic' goes for the next level in simulation

Date: May 14, 2014
Source: By David C. Walsh at DefenseSystems.com
http://defensesystems.com/articles/2014/05/14/army-live-synthetic-simulation-training.aspx
Description: The Army, like the other military services, has long made simulations a part of training. They save money—a simulated cockpit costs less to "fly" than an actual jet—and have proved effective. They take the form of anything from systems that teach how to operate a Bradley Fighting Vehicle to computer-generated battle scenes with unpredictable enemies.

TELEHEALTH

Tripler Army Medical Center, Guam ANG conduct Tele-Behavioral Health VTC demo

Date: May 15, 2014
Author: Defense Media Activity – Hawaii News Bureau
Source: Defense Video & Imagery Distribution System (DVIDS) at www.dvidshub.net
http://www.dvidshub.net/news/129798/tripler-army-medical-center-guam-ang-conduct-tele-behavioral-health-vtc-demo#.U3Tnd9LWSpk
Description: Service members and civilians from Tripler Army Medical Center (TAMC) conducted a Video-Teleconference (VTC) demo with the Guam Army National Guard, testing the capability of providing soldiers Tele-Behavioral Health (TBH) care May 13.

The Virtual Hope box mobile application focuses on positive influences in people's lives. Using the app, a person combines meaningful memories with relaxation coaching and distracting activities to help them cope.

Providers will find this app a useful resource to recommend to their patients who are experiencing distress. The app was developed from the physical "hope box" used by clinicians providing therapy for patients with thoughts of self harm. Because mobile devices are widely used, a virtual version of a hope box was seen as a contemporary approach to a known intervention, extending its usefulness and availability.

Recent research and testing has shown the Virtual Hope Box to be a useful tool for addressing many issues. Patients in the proof-of-concept testing included those diagnosed with posttraumatic stress disorder, depression, bipolar disorder, borderline personality disorder and mood disorder.

In trials the patients used the app more often than a physical hope box, and were likely to use the app in the future and recommend it to their friends.

TELEHEALTH

Report calls for National Health Policy, Increased Telehealth Use

Date: May 13, 2014

Source: iHealthBeat.org

http://www.ihealthbeat.org/articles/2014/5/13/report-calls-for-national-telehealth-policy-increased-telehealth-use

Description: The Information Technology & Innovation Foundation released a report encouraging Congress to adopt national telehealth regulations and to penalize states that do not make telehealth accessible to providers and patients, The Hill reports. The measure would create a federal definition of telehealth and provide guidance for how states can regulate such technology.

INNOVATIVE TECHNOLOGY FOR HEALTHCARE

Three Harvard hospitals pilot Google Glass app

Date: May 13, 2014

Source: Aditi Pai at mobihealthnews.com

http://mobihealthnews.com/33025/three-harvard-hospitals-pilot-google-glass-app-remedy/

Description: Developer of a Google Glass app for doctors, Remedy, launched a pilot study with three Harvard hospitals in which they will provide physicians assistants who are handling night coverage in hospitals — a time when doctors are not around as often as during the day — with Google Glass so that they can send their point of view videos to supervising doctors.

Mobile App Behavioral Health
State-of-the-Research Report
Research Studies

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National Center for Telehealth & Technology (t2.health.mil)

2014

Anderson, K. N., Goldsmith, P., & Gardiner, A. (2014). A pilot evaluation of an online cognitive behavioral therapy for insomnia disorder – targeted screening and interactive Web design lead to improved sleep in a community population. Nature and Science of Sleep, 6, 43-49. doi: 10.2147/NSS.S57852

Findings: Participant post-treatment sleep latency was statistically significantly reduced from 76 to 21 minutes, and 79 percent of participants improved sleep efficiency (72 percent reported sleep efficiency above 80%).

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Boggs, J. M., Beck, A., Felder, J. N., Dimidjian, S., Metcalf, C., & Segal, Z. V. (2014). Web-based intervention in mindfulness meditation for reducing residual depressive symptoms and relapse prophylaxis: A qualitative study.

Findings: Participants engaged in a mindfulness meditation intervention for depression endorsed developing affect regulation skills and identified several advantages to Web-based delivery including flexibility, reduced cost, and time commitment.

Crisp, D. A., & Griffiths, K. M. (2014). Participating in online mental health interventions: Who is most likely to sign up and why? Depression Research and Treatment, Advance online publication. doi: 10.1155/2014/790457

Findings: Compared to those who declined to participate in an online depression study, interested participants were more often older, female, separated/divorced, highly educated; reported current or past-history of depression; reported higher depressive symptoms; and reported low personal stigma. Despite the flexibility of online interventions, finding time to participate was the major barrier to engagement for those who declined to participate.

Holmqvist, M., Vincent, N., & Walsh, K. (2014). Web- vs telehealth-based delivery of cognitive behavioral therapy for insomnia: a randomized controlled trial. Sleep Medicine, Advance online publication. doi: 10.1016/j.sleep.2013.10.013

Findings: Both Web- and telehealth-based delivery methods produced equivalent changes in insomnia severity, with large effect sizes. Attendance patterns favored telehealth delivery, whereas homework adherence and preference data favored Web-based delivery.

Knowles, S. E., Toms, G., Sanders, C., Bee, P., Lovell, K., Rennick-Egglestone, S., …, & Bower, P. (2014). Qualitative meta-synthesis of user experience of computerised therapy for depression and anxiety. PLOS One, 9(1), e84323. doi:10.1371/journal.pone.0084323

Findings: This synthesis identified two key overarching concepts: the need for treatments to be sensitive to the individual, and the dialectal nature of user experience, with different degrees of support and anonymity experienced as both positive and negative.

Lawlor, A., & Kirakowski, J. (2014). Online support groups for mental health: A space for challenging self-stigma or a means of social avoidance? Computers in Human Behavior, 32, 152-161. doi: 10.1016/j.chb.2013.11.015

Findings: Frequency of visits to online support groups (OSG) negatively affects recovery from self-stigma, suggesting that OSGs are a form of social avoidance, as opposed to a method of challenging the problem of stigma.

Marsch, L. A., Guarino, H., Acosta, M., Aponte-Melendez, Y., Cleland, C., Grabinski, M., …, & Edwards, J. (2014). Web-based behavioral treatment for substance use disorders as a partial replacement of standard methadone maintenance treatment. Journal of Substance Abuse Treatment, 46, 43-51. doi: 10.1016/j.jsat.2013.08.012

Findings: Replacing a portion of standard treatment with a Web-based psychosocial intervention resulted in significantly greater rates of objectively measured opioid abstinence.

Van Germert-Pijnen, J. E. W. C., Kelders, S. M., & Bohlmeijer, E. T. (2014). Understanding the usage of content in a mental health intervention for depression: An analysis of log data. Journal of Medical Internet Research, 16(1), e27.

Findings: In a Web-based intervention of the early treatment of depressive symptoms, prediction of the depressive symptoms at the post-intervention time point significantly corresponded to the login and usages patterns of the website.

Voogt, C., Kuntsche, E., Kleinjan, M., Poelen, E., & Engels, R. (2014). Using ecological momentary assessment to test the effectiveness of a web-based brief alcohol intervention over time among heavy-drinking students: Randomized controlled trial. Journal of Medical Internet Research, 16(1), e5. doi:10.2196/jmir.2817

Findings: Latent growth curve analyses found that participants in the experimental Web intervention had significantly lower weekly alcohol consumption and had a significantly lower frequency of binge drinking compared to the participants in the control group (and sustained at the three-month period).

Weaver, C. C., Leffingwell, T. R., Lombardi, N. J., Claborn, K. R., Miller, M. E., & Martens, M. P. (2014). A computer-based feedback only intervention with and without a moderation skills component. Journal of Substance Abuse Treatment, 46(1), 22-28. doi: 10.1016/j.jsat.2013.08.011

Findings: Using a feedback-only intervention significantly lowered blood alcohol concentration on typical heaviest drinking days compared to the use of an assessment-only intervention. Those who also had an additional incorporated moderation skills training

Musiat, P., & Tarrier, N. (2014). Collateral outcomes in e-mental health: A systematic review of the evidence for added benefits of computerized cognitive behavior therapy interventions for mental health.

Findings: In an examination of 95 studies that met the review criteria for computerized cognitive behavioral therapy (cCBT) treatment, limited actual reported evidence was found for the claims of cost effectiveness, geographic flexibility, time flexibility, waiting time for treatment, stigma, effects on help-seeking, and money-saving claims (compared to usual care) that are often made by authors of peer-reviewed publications in regards to the outcomes of cCBT studies.

Lai, M. H., Maniam, T., Chan, L. F., & Ravindran, A. V. (2014). Caught in the Web: A review of Web-based suicide prevention. Journal of Medical Internet Research, 16(1), e30. doi: 10.2196/jmir.2973

Findings: A review of the published literature on Web-based suicide prevention strategies produced 15 articles meeting PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, with only 39 percent of the studies reported as having "high-quality" ratings. RCTs of Internet-based CBT treatments reported small effect sizes for reducing suicidal ideation in depressed participants.

van Beugen, S., Ferwerda, M., Hoeve, D., Robers, M. M. Spillekom-van Koulil, S., van Middendorp, H., & Evers, A. W. M. (2014). Internet-based cognitive behavioral therapy for patients with chronic somatic conditions: A meta-analytic review.

Findings: Guided Internet-based cognitive behavioral therapy improved all outcome categories with small effect sizes for generic psychological outcomes, and occasionally larger effects for disease-specific physical outcomes and disease-related impact outcomes. Interventions with a longer treatment duration (> six weeks) led to more consistent effects on depression.