

INNOVATE EVIDENCE-BASED MENTAL HEALTH RESEARCH



Telepsychiatry crosses language barriers

Good communication between patient and doctor is fundamental for successful psychiatric treatment. Within the U.S. there is a substantial population, about 22 percent, with limited English proficiency. The current standard for facilitating care for these individuals is through live interpreters. Unfortunately, interpreters are not always available, are not always certified, and pose significant time and cost constraints to both the patient and the practice. This results in underserved individuals receiving inadequate mental health care.

Dr. Peter Yellowlees, professor in the Department of Psychiatry and Behavioral Sciences at UC Davis and

internationally respected leader in the use of telecommunications, expects his research to “have huge implications for the way that psychiatry is practiced.”

Yellowlees received one of 23 Research Pilot Awards from the Behavioral Health Center of Excellence at UC Davis for the study, “Telepsychiatry Services Across Languages: Development and Testing of an Automated Translation and Transcription Tool Using Speech Recognition Technologies.” This award will expand upon a previous grant from the Agency for Healthcare Research & Quality (AHRQ) to study asynchronous telepsychiatry.

The study focuses on using automated translation and transcription of Spanish spoken words recorded during video interviews into English subtitles. The ability to readily translate consultations conducted in Spanish into English for practitioners to review will boost access and reduce

barriers to mental health services. This technology will serve individuals with limited English proficiency including immigrants, refugees, and those in rural areas with limited access to bilingual physicians and interpreters.

Integrated healthcare

According to the Institute for Clinical and Economic Review, “up to 70% of physician visits involve a behavioral health issue.” Even still, patients who are referred for psychiatric evaluations oftentimes will not follow through due to stigma, preference, or location.

With asynchronous telepsychiatry patients are interviewed in the comfort of their primary care physician’s office. The interview is recorded and sent to a psychiatrist for evaluation and to recommend a treatment plan. Systems developed from the Behavioral Health Center of Excellence grant will allow the same process to occur

“UC Davis is a leader in telehealth and telepsychiatry, discovering new applications and improving delivery of care, especially for underserved communities. Telepsychiatry can make a big difference in the lives of those with mental illness.”

*-Thomas Nesbitt, M.D., M.P.H.
Associate Vice Chancellor for Strategic Technologies and Alliances at UC Davis*



Sample screen of Yellowlees' application on a tablet.

for individuals with lower English proficiency.

Overcoming barriers

Yellowlees hopes to “improve quality of care with better quality and accessible translations” in order to address the problem of poor mental health access for underserved minority groups. By providing an interface that will generate simultaneous translations, he expects to see a reduced dependence on having doctor and patient in the same place, at the same time, speaking the same language.

Video as data

The research will evaluate the most accurate translation method by comparing accuracy of engines such as Bing and Google Translate to UC Davis interpreters. It will also identify the diagnostic accuracy produced by doctors using machine translations and compare the time and cost efficiency.

Yellowlees is aiming for “instantaneous recorded translations of a quality that is sufficient for medical practice.” The ability to capture video consultations that can be translated effectively into other languages may open doors for

the how medicine is approached. By using video as data, collaboration with primary care will become more efficient. “Our long-term goal is to develop good quality translation for anyone, anywhere and not just in medicine,” said Yellowlees of his pilot award with co-investigator, Steven Chan, M.D.

Applications

Yellowlees is a resource for organizations implementing telehealth solutions or needing to improve their existing system, such as the California Correctional Health System which uses telepsychiatry to serve the increasing population of incarcerated individuals with mental illnesses.

Yellowlees is the newly elected vice president of the American Telemedicine Association. The ATA promotes the use of advanced remote telecommunications for health-care and consultation. Yellowlees' research points to opportunities and advantages of having a technology interface between patient and doctor which are becoming more apparent in an increasingly electronic health environment.

The Behavioral Health Center of Excellence at UC Davis looks toward future health solutions using telepsychiatry in integrated health care systems and as a way to better serve underserved individuals in our communities.

Resources

UC Davis Center for Health and Technology:
ucdmc.ucdavis.edu/cht

Department of Psychiatry and Behavioral Science, School of Medicine, UC Davis:
ucdmc.ucdavis.edu/psychiatry

Behavioral Health Center of Excellence at UC Davis

UC Davis launched the Behavioral Health Center of Excellence in October 2014 to advance mental health research and policy with initial funding from the Mental Health Services Act. The Innovate series highlights the Center's \$4.3 million Research Pilot Award program.

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