ABSTRACT

The rapid growth in the use of telecommunication technologies can reduce disparities and amplify the humanity of the health care system. Clinical and social work research and practice increasingly show promise of care-management for reducing disparities in depression care. In this talk, Dr. Shinyi Wu will describe her engineer-designed clinical trial that exploits telecommunication technologies to facilitate adoption of evidence-based collaborative depression care in safety net clinics. This Diabetes-Depression Care-management Adoption Trial (DCAT) tests an automated telephonic assessment and web-based provider notification system (ATA) tethered to diabetes patient registry system to expand the capacity of the diabetes care team for depression care management. The system aims to shift the burden of routine work to machines and frees up providers to deliver effective, efficient, and compassionate care to those most in need. The technology was tested in a quasi-experimental comparative-effectiveness trial with 1406 diabetes patients in a large public safety-net care system serving primarily minority patients. The comparisons included a usual care group, a care-management group, and a care-management with technology group. Properties of the care-management technology were evaluated and patient and provider user experiences were assessed. Generalized linear and logistic regression analyses with propensity score methods were conducted to compare group effectiveness on patient outcomes and cost-effectiveness of the 3 care models. This study serves as a roadmap for engineers interested in conducting clinical trials to test health technology.
Shinyi Wu (PhD, University of Wisconsin–Madison) is an Associate Professor in the USC School of Social Work with a joint appointment in the Epstein Department of Industrial and Systems Engineering. She serves as the Associate Director of Social and Health Services Research in the USC Roybal Institute on Aging. Applying her engineering background, her work has focused on ways to improve quality and cost-effectiveness of health services and population health, especially for patients with chronic illnesses, the elderly, and disadvantaged populations. Dr. Wu was the principal investigator of the DCAT trial to improve care for patients with concurrent diabetes and depression. Currently she is leading another trial to study mobile technology and aging, titled “Intergenerational Mobile Technology Opportunities Program” (IMTOP). Her other current work involves testing interventions to reduce health care disparities, including an NIH study to develop and evaluate a mobile health technological approach to implement care management for underserved stroke patients, and a PCORI study to test a promotora (community healthcare worker) intervention for patients with multiple chronic illnesses and depression.

Prior to joining USC, she was a researcher at RAND, where she also co-directed the NIA-funded Roybal Center for Health Policy Simulation. She was honored as an outstanding researcher by RAND for her contributions to improving health policy and decision-making.