A Telehealth Intervention to Reduce Readmission Rates in Cirrhosis and Liver Transplant Patients
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Cirrhosis affects > 600,000 US adults, resulting in > 150,000 hospitalizations, > 60,000 deaths, and 6000 liver transplants annually, with direct costs of > $4 billion and indirect costs > $12 billion yearly. These numbers will rise exponentially over the next 20 years, compounding disease burden, suffering, and economic and social cost.

Inpatient care in cirrhotics and liver transplant recipients causes significant emotional and physical distress for patients and caregivers. 30-day readmission rates for US cirrhotics and liver transplant recipients are 20-35% and 40-50% respectively. Nearly 20% of these are potentially avoidable, yet no published telehealth or patient centered interventions target this population. This is one of the most high-risk populations for poor health outcomes. 30-day readmission rates affect patients and health systems and transitions of care are a time at which improvements in this metric can be made.

The investigators have developed an innovative wireless mobile device monitoring system to detect early symptoms and signs, thereby preventing readmissions. The proposed study will utilize a randomized controlled trial to compare controls (current discharge standard of care) to wireless monitoring and social support. This study will allow us to expand our telehealth program that reduced readmission rates from 28% to 8.2% to those who do not live near to Penn and to those who are not homebound. This will be the first study to examine readmissions using a patient centered approach and the first to use telehealth to decrease readmissions in cirrhosis and liver transplant, addressing gaps in knowledge and care.