UB researcher receives $7 million award to study telemedicine as a way to treat HCV-infected drug users

If successful with HCV, telemedicine could be a valuable approach to treating other diseases where patients face similar challenges

By Ellen Goldbaum

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Andrew H. Talal, MD, Professor, Department of Medicine
Jacobs School of Medicine and Biomedical Sciences

BUFFALO, N.Y. - Andrew H. Talal, MD, professor of medicine at the Jacobs School of Medicine and Biomedical Sciences at the University at Buffalo will receive a major, $7 million award to address a casualty of the national opioid epidemic: the spread of hepatitis C virus (HCV) among drug users who share needles.

The funding award is from the Patient-Centered Outcomes Research Institute (PCORI), which Congress authorized in 2010 to conduct evidence-based research to identify the most effective health care approaches.

"The opioid epidemic creates secondary health, economic and social repercussions that pose their own challenges and require serious attention," said Congressman Brian Higgins, a member of the Congressional Bipartisan Task Force to Combat the Heroin Epidemic. "Research happening right here at the University at Buffalo is once again developing innovative treatment options and this significant award demonstrates the confidence in UB's work to help to address a national and growing problem."

The purpose of the five-year award to UB is to find an effective way to treat drug users with HCV, a population that has traditionally been difficult to treat in conventional health care settings. Even when receiving regular treatment for substance use at methadone clinics, these patients often don’t seek treatment for HCV, despite the fact that roughly half of them or more are likely chronically infected. In 2014, HCV killed a record 20,000 Americans, according to the Centers for Disease Control and Prevention and liver related deaths are projected to increase exponentially over the next decade.

"The conventional method of treatment delivery -- referral to an offsite location -- has discouraged many individuals from initiating or completing treatment," said Talal.

He noted that these individuals may have low literacy and multiple medical conditions, including depression and anxiety, which often discourage them from seeking treatment for HCV. They are more likely to be affected by poverty and a lack of social support.

Misconceptions and distrust of the medical community also are factors, Talal said. "These patients may perceive medical providers as judgmental, unresponsive to their medical needs and disdainful," said Talal, all of which drive them away from seeking treatment for HCV.

To overcome these issues, integrating substance abuse treatment and HCV treatment has been widely advocated, he continued, but physical integration has been difficult to achieve since such services often aren’t available in the same clinic. In the new project, Talal and his colleagues will use telemedicine, two-way live videoconferencing, between a physician and a patient in separate geographic locations, as a treatment delivery strategy. "Telemedicine permits virtual integration," Talal added.

"This strategy enables HCV treatment to be delivered in the familiar environment of the opiate treatment program," he explained, "allowing the HCV provider and the addiction medicine team to work together to evaluate and treat patients."
Preliminary results have been promising. In April, at the European Liver Conference in Barcelona, Talal reported on a group of 18 drug users with HCV who were receiving addiction treatment at a methadone clinic in New York City. Those patients received HCV medication while participating in biweekly telemedicine conferences with Dr. Talal located 400 miles away at UB.

"Not only did the patients grow increasingly comfortable with the telemedicine sessions, but they reported that they preferred these sessions over going to another site for treatment," said Talal. "Our conclusion from this small study was that telemedicine-based HCV care is a feasible, reimbursable model for drug users who are receiving treatment for their addiction in a clinic."

The PCORI-funded project aims to test that finding in a much larger population of 624 drug users at a dozen urban and rural methadone clinics throughout New York State in the Buffalo, Rochester, Albany and New York City areas. The clinics will offer the telemedicine approach to half of the patients, and standard delivery of care (typically off-site referrals) to the other half. While the primary outcome is viral eradication after treatment, measurement of patient satisfaction and adherence with treatment are also important outcomes. Follow-up after treatment is completed will also enable the researchers to evaluate the risk of reinfection.

"With this award, we will establish a statewide network of clinics that will follow patients who receive routine care through off-site referrals and subsequently compare it to treatment through telemedicine," said Talal.

Talal conducts research on HCV in UB's Clinical and Translational Research Center and sees patients as a physician with UBMD Internal Medicine. He also has an appointment as adjunct associate professor of medicine at Weill Cornell Medical College.

In addition to Talal, other UB investigators on this project are Marianthi Markatou, PhD, professor and associate chair for research in the Department of Biostatistics in the School of Public Health and Health Professions and Richard Blondell, MD, professor and vice chair of addiction medicine in the Department of Family Medicine.

Other investigators are Lawrence Brown, MD, chief executive officer of START Treatment & Recovery Centers; Jonathan Tobin, PhD, president of Clinical Directors Network, and Don Des Jarlais, PhD, director of research, Baron Edmond de Rothschild Chemical Dependency Institute at Mount Sinai Beth Israel Medical Center.

PCORI's board has approved this award to UB pending completion of a business and programmatic review by PCORI staff and issuance of a formal contract award.

PCORI is an independent, non-profit organization authorized by Congress in 2010. Its mission is to fund research that will provide patients, their caregivers and clinicians with the evidence-based information needed to make better-informed healthcare decisions. PCORI is committed to continuously seeking input from a broad range of stakeholders to guide its work.

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