Telemedicine-based Management of Hepatitis C Virus (HCV) Infection for Individuals on Opiate Agonist Treatment

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Background and aims: Despite high HCV prevalence, persons on opiate agonist therapy (OAT) rarely engage in HCV care as most programs refer clients offsite. Despite widespread enthusiasm for integration of treatment for substance use and co-occurring infectious diseases (i.e. HIV, HCV), physical integration has been difficult to achieve. Virtual care integration through telemedicine (two-way video conferencing), which permits direct interaction between patients and specialists in distinct locations, might be useful for HCV care among OAT patients.
Methods: All patients actively enrolled in one of START Treatment & Recovery Center's Manhattan clinics were eligible to participate in HCV-related education. Subsequently, HCV RNA positive patients were offered an onsite HCV evaluation via telemedicine with a physician assistant and an offsite hepatologist connected via telemedicine. All pretreatment labs including HCV RNA, HCV genotype and fibrosis assessments (Fibrosure) were performed onsite. Direct acting antivirals (DAA) were ordered electronically, procured by a specialty pharmacy, and were co-administered with methadone using directly observed therapy (DOT). Charges for medical visits were submitted electronically to third party payers. Patient satisfaction was assessed by the telemedicine satisfaction questionnaire (TSQ) and medication adherence through an adherence survey.
Results: A total of 61 HCV RNA-positive patients (61% male, 64% black/African-American, 30% Hispanic, 25% HIV-infected) received an HCV evaluation via telemedicine. All patients were stable on methadone and all except 3 had HCV genotype 1. Fibrosis assessment in 57 patients who underwent Fibrosure revealed: mild (stage 0-1) in 18/57 (32%), moderate (stage 1-2) in 20/57 (34%), and severe (stage 3-4) in 19/57 (33%) patients. Forty-three patients have begun treatment with DAA-based regimens and 21 patients have achieved sustained virological response (SVR). An additional 10 patients have achieved undetectable HCV RNA at week 4 post-treatment cessation, and 11 remain on or have recently completed treatment. One elderly patient relapsed after treatment discontinuation after 4 weeks due to gastrointestinal side effects. To date, insurance mandated fibrosis or drug use restrictions have not prevented any patient from ultimately receiving DAA-based therapy. With regard to telemedicine delivery, no auditory or visual communication issues were identified. Over time, TSQ results illustrated that subjects became more comfortable with telemedicine-based HCV treatment delivery and increasingly prefer onsite compared to offsite referral. Based upon adherence survey data and DOT, DAA adherence has been excellent.
Conclusions: Telemedicine-based HCV care is a feasible, reimbursable model for HCV treatment delivery in an OAT program with excellent initial patient acceptance that strengthens over time. Patient adherence and antiviral efficacy have been excellent. Telemedicine can virtually integrate specialty-based care into the OAT clinic.