Utilization of Telemedicine to Treat Hepatitis C at a Medication-Assisted Opioid Treatment Program

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Stage 2: Treatment of eligible patients for Hepatitis C at their substance abuse treatment clinic for consultations and the prison or disenfranchised groups, such as the uninsured/underinsured and persons who are actively addicted to substances. Telemedicine has proven effective in delivering medical care to populations whose access to care might be limited due to geography (e.g., rural areas), physical limitations, such as bedridden patients, patients who are too ill to travel, or those who are unable to access medical care. Telemedicine utilizes a variety of technologies and services such as video conferencing, direct digital and audio conferencing, and other forms of telecommunication technology to provide these medical services. This service is timely because of the known challenges of having patients go outside the location of their substance abuse treatment clinic for consultations and the receipt of needed referrals for more effective and more easily tolerated treatment.

In this regard, when patients are referred to a medical specialist, it is often the case that patients will not comply with the referral. Reasons for non-compliance are various and numerous, and include perceived lack of benefit, lack of knowledge, difficulty in reaching the specialist, and physical limitations. These barriers to care are especially significant for persons who are in substance abuse treatment programs. They also are likely to be patients who are evaluated and treated in a timely fashion. In some cases, the barriers are societal or cultural in nature, instead of being the patient’s own. The next two phases of this study consist of first, providing hepatitis C education to the treatment staff and a population that suffers substantially from this disease, and second to provide on-line linkage to specialized medical services.

**Abstract**

**Objectives**

- The study consists of 3 phases:
  - **Stage 1a**: Determine patient interest in receiving on-site education, evaluation for treatment, and on-site treatment
  - **Stage 1b**: Provision of educational sessions covering Hepatitis C
  - **Stage 2**: Treatment of eligible patients for Hepatitis C at their substance abuse treatment clinic with specialist participation via telemedicine

**Stage 1a: Patients and Methods**

- **A 28-item survey was developed to assess the following**:
  - Demographics (age, gender, race/ethnicity, education level and employment/disability status)
  - Former and current (within last 6 months) drug habits
  - Hepatitis C status
  - Willingness to participate in HCV-related educational and treatment activities
  - Specific reasons for the lack of willingness to participate in HCV-related educational and treatment activities
  - Would compensation affect their willingness to participate in HCV-related educational activities

**Stage 1a: Results**

**HCV-related knowledge**

- The median number of correctly answered questions was 9 (62%)
- 54.7% of patients correctly responded to at least 5 questions.

**Willingness to engage in HCV education**

- 61% of respondents previously attended HCV-related educational activity: 35.5% onsite and 25.5% elsewhere.
- Among HCV-related education had been periodically offered onsite, 46% of eligible patients were offered HCV treatment.
- 78.3% of respondents expressed willingness to participate in future onsite educational activities.

**Willingness to engage in HCV treatment**

- If ever diagnosed with hepatitis C, 78% (248/318) of respondents would be willing to be treated, 16.7% (53/318) would not be willing to be treated, and 4.5% (14/318) were unsure whether they wanted to undergo treatment.
- Among those who expressed willingness to be treated were significant knowledge (52.5 ± 9.5 × 5.4 ± 7.3 years, p < 0.013) compared to those who would not want to be treated.
- Prior to HCV treatment, 47.6% (150/313) were uncertain about the consequences of treatment (p = 0.037) or willingness for future engagement (p < 0.0001), predicted HCV care continuation.
- Those who scored higher on HCV knowledge test (responded correctly to all 5 questions) were more likely to accept HCV treatment (p = 0.0288).

**Stage 1a Conclusions**

- The majority of patients (78%) expressed willingness to be treated for HCV and to participate in HCV-related educational activities.
- Respondents demonstrated substantial HCV-related knowledge: 54.7% correctly responded to at least 5 of 7 HCV-related knowledge questions.
- Patients who previously attended HCV-related educational activities scored higher on HCV knowledge questions.
- Patients who scored higher on HCV knowledge questions were more likely to accept HCV treatment.

**Stage 1b & Stage 2: Current Status**

- The encouraging findings in Stage 1a, were borne out by willingness of patients to participate in Stage 1b, education sessions
- 128 patients have received education and additional sessions continue on a weekly basis
- 50 patients have been evaluated for treatment with additional patients willing to be evaluated
- 48 patients have been evaluated and treated with telemedicine support with additional patients to follow

**Background**

- Patients who inject drugs (PWID) represent the majority of HCV-infected people in the United States, but only 58.3% of respondents were aware of it.
- Most patients were well aware of basic facts about the infection: 9 vs. 55.4 ± 7.3 years, p < 0.013) compared to those who would not be treated.
- Of patients who would not attend future educational activity, 26% (38%) indicated that compensation could positively affect their decision, while 42% (62%) indicated no effect of compensation on their decision.

- The following categories of patients were significantly more likely to want to be treated for HCV:
  - Those who were willing to be treated for HCV (p = 0.0299)
  - Those who desired HCV treatment compared to those who were not willing to be treated (p = 0.0007)
  - Those who previously attended HCV-related educational activity (p = 0.0015), or who were willing to attend it in the future (p = 0.0229)

- Most patients were aware of basic facts about the infection:
  - That injection drug use is the primary route of transmission (90.3%)
  - That HCV treatment exists (87.9%)
  - That spontaneous resolution of the infection or clearance upon treatment do not protect against future infections (78.4%)

**Characteristics**

- The following groups of patients scored significantly higher on HCV knowledge assessment:
  - Those who reported positive HCV status (p = 0.0007)
  - Those who had previously attended HCV-related educational activity (p = 0.0015), or who were willing to attend it in the future (p = 0.0229)
  - Those who were willing to be treated for HCV (p = 0.0229)

**Statistical analysis**

- Prior to HCV treatment, 47.6% (150/313) were uncertain about the consequences of treatment (p = 0.037) or willingness for future engagement (p < 0.0001), predicted HCV care continuation.
- Those who scored higher on HCV knowledge test (responded correctly to all 5 questions) were more likely to accept HCV treatment (p = 0.0288).

- Most common reasons for treatment unwillingness:
  - Fear of side effects (28.8%)
  - Prior unsuccessful HCV treatment (n = 8)
  - Desire for further discussion with a healthcare provider (n = 6)
  - Lack of knowledge about HCV (n = 4)
  - Questionable diagnosis (n = 4)
  - Competing medical priorities (n = 3)