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## INTRODUCTION

Hepatitis C virus (HCV) infection currently affects approximately 2.5–4.7 million people in the US. Despite the availability of highly effective oral direct-acting antiviral (DAA) medications with cure rates >95%, mortality rates in people with HCV remain high and surpasses many other chronic infectious diseases, including HIV.

Cigarette smoking has emerged as a leading cause of mortality among people with HCV. An estimated 62% of people with HCV smoke cigarettes, 3- to 4-fold higher than the general adult population (14%). Smoking is also associated with life-threatening complications among people with HCV, such as cirrhosis and hepatocellular carcinoma. Moreover, smoking has been associated with lower rates of HCV treatment initiation and lower rates of sustained viral response (SVR) (i.e., HCV cure). Therefore, a critical component to improving health and treatment outcomes among people with HCV is to address cigarette smoking.

Co-located models of care in which HCV care is provided at the same settings as other comorbidities is the approach of choice to deliver care among this population. It is noteworthy that despite having medications to effectively address both conditions (smoking and HCV), no study to date has aimed at treating both concurrently.

## AIMS

We conducted a single arm pilot study aimed at assessing the feasibility and preliminary efficacy of an integrated intervention designed to treat HCV and smoking concurrently (NCT05466981)

## METHODS

### PARTICIPANTS

#### Inclusion Criteria:

- ✓ Age ≥18 years
- ✓ Have HCV RNA+
- ✓ Interested in quitting
- ✓ Fluent in English
- ✓ Have received at least four weeks of buprenorphine

#### Exclusion criteria

- ✓ Medical instability that would make participation hazardous
- ✓ Women who are pregnant or breastfeeding
- ✓ Do not have a phone with data/minutes

Table 1. Participant's Characteristics at baseline

Characteristic	M(SD) or n(%)
<b>Sociodemographic</b>	
Age	48.5 (11.3)
Biological Sex (female)	3 (30.0%)
Race (White)	8 (80.0%)
Highest degree (HS diploma)	5(50%)
Unstable transportation	7(70%)
<b>Smoking-related characteristics</b>	
Cigarettes per day	13.2 (6.5)
Years smoking	19.6 (10.3)
FTND	4.5(1.8)
Prior quit attempts	8(80.0%)
<b>Drug-related characteristics</b>	
Polydrug use	6(60.0%)
History of injection drug use	7(70.0%)

### INTERVENTION

12-week, protocolized intervention (1 session/week)

Delivered via phone:

1. Medication
2. Medication adherence support for HCV and smoking
3. Education about HCV and smoking
4. Counseling

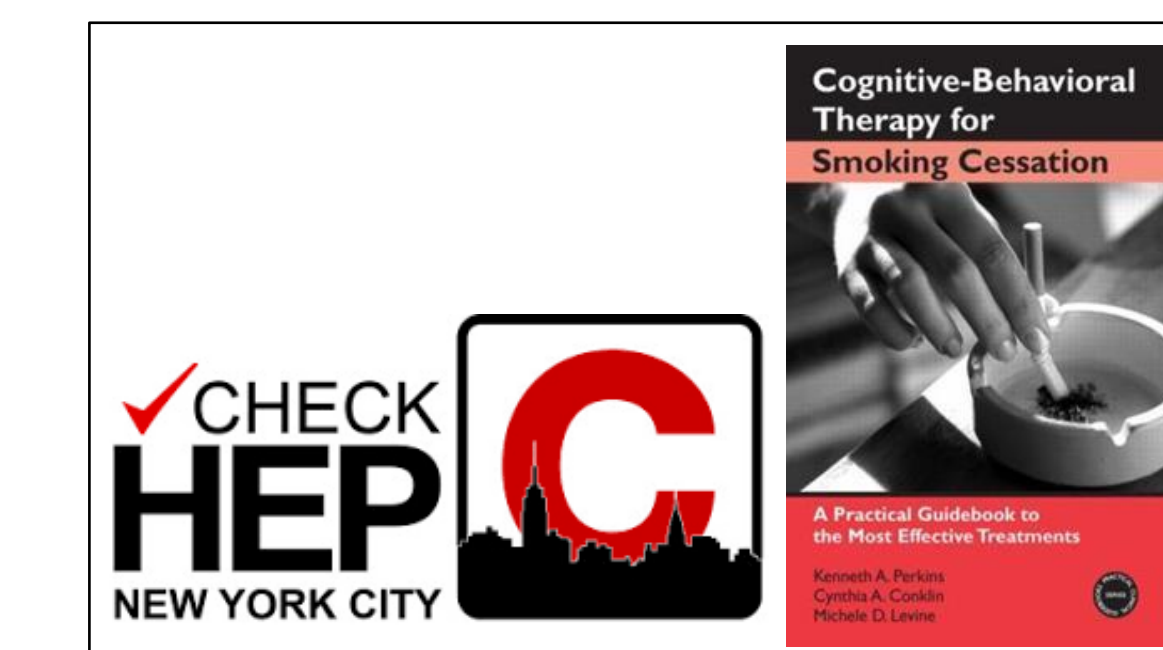


Fig 1. Manuals for the intervention that were digitized

### OUTCOMES

#### PRIMARY

- **Feasibility**
  - Treatment initiation (HCV and smoking cessation) and session attendance
- **Efficacy** (at 12-week follow-up)
  - Cigarettes smoked per day (CPD; self-reported)
  - Sustained virologic response (i.e., HCV cure)

#### SECONDARY

- **Smoking-related** outcomes: history of tobacco use, nicotine dependence, withdrawal symptoms
- **HCV-smoking** related outcomes: history of HCV treatment, adherence to DAAs
- **Drug-related** outcomes: history of injecting drugs, current drug use

## RESULTS

**Feasibility:** treatment initiation and session attendance

- **90%** of participants started DAAs to treat HCV
- **70%** started pharmacotherapy for smoking cessation
  - ❖ 2 Varenicline, 1 Bupropion, 3 combination NRT
- Participants completed an average of 6.7 sessions

**Treatment outcomes:** changes in CPD and HCV cure

- **60%** had an undetectable viral load (HCV cure) at the 12-week follow-up
- CPD decreased significantly at the end of the 12-week follow-up relative to the baseline visit (13.2 vs. 4.7, p<.001)
- 2 participants quit smoking (biochemically verified, CO≤6 ppm)

## CONCLUSIONS

▪ This is the first study to examine the feasibility and preliminary efficacy of an intervention for HCV and smoking among smokers living with HCV. Two results to highlight:

- ❖ **The integrated, remote intervention was feasible for smokers living with HCV.**
- ❖ **The integrated intervention showed preliminary efficacy for facilitating reductions in cigarettes smoked per day:**

▪ Remote trials offer a feasible alternative to traditional in-person trials to target cigarette smoking in people living with HCV- especially important given their limited access to transportation (70% in this study).

▪ To improve health outcomes among people living with HCV we should implement bundled models of care to address concurrent conditions.