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Integrated Telemedicine-based Treatment for Hepatitis C Virus (HCV) at an Opioid Agonist Treatment Program

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BACKGROUND

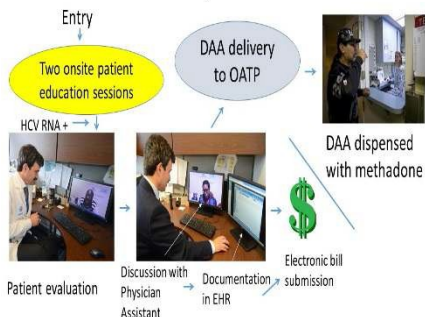
- Despite high HCV prevalence, persons on opiate agonist therapy (OAT) rarely engage in HCV care when referred to offsite locations.
- Integrated, co-located care of substance use disorders and co-occurring conditions (i.e. hepatitis C and HIV) is widely advocated but has been difficult to implement.
- Telemedicine (two-way videoconferencing) between a patient and specialist, each geographically separated, permits virtual integration of substance use treatment with that for co-occurring conditions.

OBJECTIVES

- To evaluate efficacy of telemedicine-based HCV treatment among patients on OAT.
- To evaluate OAT patient satisfaction with telemedicine using the Telemedicine Satisfaction Questionnaire (TSQ) as well as treatment adherence.

MATERIALS & METHODS

Study Flow



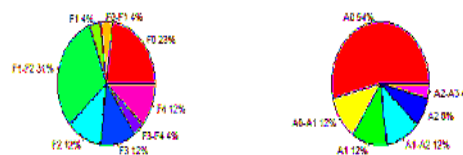
- All pre-treatment labs (HCV RNA, HCV genotype, Fibrosure [Labcorp]) obtained onsite.
- Patients treated for 8 or 12 weeks with 12 week post-treatment follow up to determine SVR status. Telemedicine-based visits occur biweekly during HCV therapy.
- TSQ administered at first telemedicine evaluation, at initiation of therapy, and at completion of follow up. Adherence is assessed biweekly while under HCV therapy.

- A total of 32 patients have been evaluated and 18 (56%) have completed DAA-based therapy (9/18 received 8 weeks of treatment).
- All patients are HCV undetectable at weeks 4 or 12 post-treatment.

Variable	Total	Level	Count	Percent
Gender	32	M	22	68.8
		F	10	31.3
Race	32	AA	25	78.1
		Black	1	3.1
		Neither	4	12.5
		White	2	6.0
Ethnicity	32	Hispanic	8	25
		Non Hispanic	24	75
		Hispanic		
HIV	32	No	19	59.4
		Yes	8	25.0
		Unknown	4	15.6
HCV genotype	26	1 no subtype	1	4.0
		1a	14	54
		1b	10	38
		3	1	4
		Mean	SD	Median
Age	32	59.2	9.8	61.4
HCV RNA	32	6.4	0.5	6.3

Abbreviations: OAT-opiate agonist therapy; TSQ-Telemedicine Satisfaction Questionnaire; DAA-direct acting antiviral, EHR-electronic health record; SVR sustained virological response; SD-standard deviation.

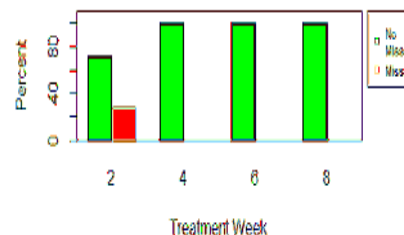
RESULTS



Fibrosis Stage Inflammatory Grade

Adherence and Side Effects

Missed Doses in Last Two Weeks



- Treatment-related side effects include gastrointestinal (nausea, vomiting, diarrhea, constipation, bloating), headache, and dizziness. One patient each had ribavirin induced rash and significant anemia.
- Insomnia reported by 40% to 50% of subjects, although high baseline level in substance using population.

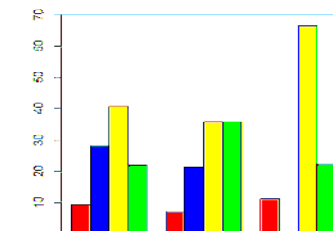
Conclusions

- Telemedicine-based HCV care is a feasible, reimbursable model for HCV treatment delivery in an OAT program.
- Excellent patient acceptance that improved over time.
- Excellent adherence and treatment efficacy.

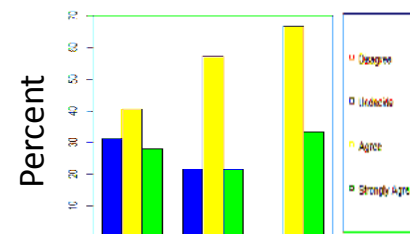
Telemedicine Satisfaction

No technical difficulties with telemedicine delivery Over time, subjects became more comfortable with telemedicine-based HCV treatment delivery and increasingly prefer compared to off-site referral.

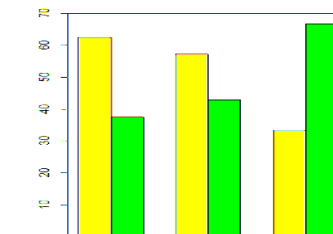
"I prefer to see the doctor through a computer rather than to go to an off-site clinic."



"I would recommend medical treatment via computer to a friend."



"The computer consultation met my medical needs"



Survey administration