TELEMEDICINE FOR THE TREATMENT OF HEPATITIS C: A SYSTEMATIC REVIEW AND META-ANALYSIS

Authors:
de Gijsel D[1,2], Hakim D[1], Moore S[1], Kruger B[1]

[1]The Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH
[2]Dartmouth-Hitchcock Medical Center, Lebanon, NH

Background:
Hepatitis C (HCV) is a curable cause of liver disease, typically treated by specialists. Access to specialists is limited in rural areas, which in the US are seeing an increase in injection drug use. Telemedicine between generalists and specialists could yield outcomes comparable to care provided by specialists in face-to-face (FTF) encounters.

Methods:
We searched MEDLINE, the Cochrane Library, ClinicalTrials.gov, the Database of Abstracts of Reviews of Effects, and Excerpta Medica DataBASE from inception to March 2018. We included Randomized Controlled Trials (RCTs) and cohort studies comparing telemedicine in rural settings to FTF encounters with specialists in treating HCV. Studies reported sustained virologic response (SVR). We did not apply any exclusion criteria. At least two independent researchers used PRISMA guidelines to extract data. We used a modified Newcastle Ottawa Scale and the Cochrane Collaboration Tool for Assessing Risk of Bias to assess observational studies and RCTs. We used a random-effects model to calculate pooled odds ratios (OR). The primary outcome was clinical cure, defined as SVR at 12 weeks after completion of treatment.

Results:
Of 1,211 eligible studies, 10 studies, representing 43,117 subjects, met inclusion criteria. Pooled analysis showed no difference in the odds of achieving SVR when comparing telemedicine to FTF specialist care (OR 1.01 [95% CI 0.781.30]). This result was robust across sensitivity analyses, including restriction to patients who completed treatment (OR 0.78 [95% CI 0.431.43]).

Conclusion:
In rural areas with limited access to specialists, care provided by telemedicine-supported generalists is as effective as FTF specialist care in achieving cure of HCV. Telemedicine is a viable option to expand access to HCV care in rural settings.

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