INTERVENTIONS TO ENHANCE TESTING AND TREATMENT UPTAKE FOR HEPATITIS C INFECTION: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background:
Hepatitis C virus (HCV) elimination efforts require evidence-based interventions to improve the HCV care cascade. We conducted a systematic review to assess the effect of interventions to enhance HCV testing, linkage to care, treatment uptake, treatment outcomes and post-treatment follow-up. This analysis focuses on interventions to enhance HCV testing and treatment uptake.

Methods:
We searched bibliographic databases and conference abstracts for studies assessing interventions to improve stages of the HCV care cascade. To be included, studies needed to include a comparator. No restrictions on date or population were made. Meta-analysis was used to pool the effect of interventions on study outcomes.

Results:
From 16,191 unique records assessed, 187 studies were included. Most studies (k=180) were conducted in 15 high-income countries with seven studies occurring in four middle-income countries. The most common study populations included birth cohort (k=46), general population (k=42), people who inject drugs (k=14), people in prison (k=12) and people receiving opioid agonist therapy (OAT; k=7). Data from 96 studies revealed the interventions which improved HCV antibody testing uptake included medical chart reminders (k=24; pooled odds ratio [OR] 6.75; 95% confidence interval [CI] 4.32-10.56), provider education (k=11; OR 1.78; 95% CI 1.49-2.14), patient reminders for testing (k=8; OR 9.14; 95% CI 3.53-23.68), patient education (k=6; OR 4.18; 95% CI 1.25-13.96), point of care testing (k=4; OR 23.43; 95% CI 8.20-66.98), and dried blood spot testing (k=3; OR 2.42 95% CI 1.45-4.02). Data from 46 studies revealed interventions which improved HCV DAA treatment uptake included patient navigation (k=4; OR 3.48; 95% CI 1.66-7.26) and integrated care (k=4; OR 5.74; 95% CI 1.04-31.54).

Conclusions:
Several interventions were identified which improved HCV testing and treatment uptake. There remains limited data for several interventions, including point of care testing for treatment uptake, particularly in low- and middle-income countries.