Interventions to enhance testing and linkage to treatment for hepatitis C infection for people who inject drugs: a systematic review and meta-analysis

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Background: In high-income countries, the majority of new and existing cases of HCV are among people who inject drugs; however, testing and treatment in this population remains low. To achieve the WHO elimination targets, interventions are needed to address the barriers to care for people who inject drugs. We aimed to assess the efficacy of interventions to improve HCV care.

Methods: We searched bibliographic databases and conference abstracts for studies assessing interventions to improve the following study outcomes to July 21, 2020: HCV antibody testing, RNA testing, linkage to care, and treatment initiation. We included randomised and non-randomised studies (with a comparator arm) assessing non-pharmaceutical interventions among a population of people who inject drugs. Meta-analysis was used to pool the effect of interventions on study outcomes.

Findings: Of 15,342 unique records, 47 studies were included (28 randomised, 19 non-randomised). Four interventions demonstrated an improvement on HCV antibody testing uptake: provider HCV care coordination (two studies; OR 3.68, 95% CI 2.12-6.38), dried blood-spot testing (two studies; OR 3.11, 95% CI 2.70-3.58), patient memory practice (a psychological intervention to improve client recall of recently learned information; two studies; OR 2.45, 95% CI 1.50-4.01), and patient education (five studies; OR 1.63, 95% CI 1.12-2.36). Linkage to HCV care was improved by integration of HCV care into other services (two studies; OR 8.11, 95% CI 3.69-17.31), patient navigation (three studies; OR 3.10, 95% CI 2.05-4.69), and point-of care antibody testing (three studies; OR 1.70, 95% CI 1.35-2.16). Integrated

care was also effective at improving the uptake of DAA treatment (two studies; OR 23.45, 95% CI 8.89-61.87).

Interpretation: The identified interventions address key barriers to HCV care faced by people who inject drugs. Further high-quality research, including rigorously designed randomised studies, are still needed in key settings.

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