MAXIMISING ADHERENCE TO DIRECT-ACTING ANTIVIRALS AMONG STREET-BASED AND MARGINALISED CLIENTS: THE RESULTS OF DAILY DOSING

Read P[1,2], Gilliver R[1], Kearley J[1], Lothian R[1], Cunningham E[2], Dore GJ[2]
1- Kirketon Road Centre, Sydney, Australia
2- Kirby Institute, UNSW Sydney, Australia

Background: A community-based public health facility in Sydney, Australia, the Kirketon Road Centre (KRC) provides healthcare to people who inject drugs (PWID), homeless and other marginalised people. Since March 2016, KRC has provided treatment for hepatitis C virus (HCV) with direct acting antivirals (DAAs). We aimed to evaluate treatment adherence among clients taking DAAs in a highly marginalised population.

Methods: All clients who commenced DAA therapy prior to March 2018 at KRC were included in this observational cohort with a subset of clients attending daily or weekly for enhanced adherence support and dosing. Demographic, behavioural, clinical measures and medication dosing was recorded and adherence calculated as the proportion of doses taken. Factors associated with adherence were examined using logistic regression.

Results: 242 individuals commenced DAA therapy, of whom 79 (32%) received enhanced adherence support. Enhanced support was associated with homelessness, daily injecting, Aboriginality, mental health co-morbidity and poly-drug use (all $p<0.001$). Overall adherence was 86%, and 91% of patients missed one or more doses (median 10, IQR 4-24). At least 90% adherence during planned duration was seen in 38%, but increased to 66% by continuing therapy beyond planned duration. General estimating equation demonstrated a trend to adherence reduction over the course of treatment ($p=0.071$). Late occurrence of first missed dose predicted overall better adherence (aOR=4.59, 95%CI: 1.25-16.93, $p=0.022$). Overall SVR12 was 68% and 66% in the enhanced adherence support arm, with 29% lost-to-follow up by SVR12 testing. There were only 2 (0.8%) documented virological failures.

Conclusion: Adherence support may benefit those with multiple markers of marginalisation, and can optimise treatment outcome. Concerns that poor adherence may compromise virological cure in this population appear unjustified. Extension of therapy beyond planned duration is a pragmatic strategy to enhance completion. Strategies to improve follow-up, particularly post-treatment are required.

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