REAL-WORLD EFFECTIVENESS OF RETREATMENT FOR REINFECTION AND VIROLOGICAL FAILURE AMONG PEOPLE WHO INJECT DRUGS IN THE REACH-C COHORT

Carson J M[1], Hajarizadeh B[1], Hanson J[1,2], O'Beirne J[3,4], Iser D[5], Read P[6], Balcomb A[7], Davies J[8,9], Doyle J[10,11], Yee J[1], Martinello M[1,12,13], Marks P[1], Dore G J[1,13], Matthews G V[1,13] on behalf of the REACH-C Study Group

[1] The Kirby Institute, UNSW Sydney, Sydney, Australia; [2] Cairns and Hinterland Hospital and Health Service, Cairns, Australia; [3]Sunshine Coast Hospital and Health Service, Sunshine Coast, Australia; University of the Sunshine Coast, Sunshine Coast, Australia, [5]Scope Gastroenterology, Melbourne, Australia; [6]Kirketon Road Centre, Sydney, Australia; [7]Prince Street Medical, Orange, Australia; [8]Menzies School of Health Research, Darwin, Australia; [9]Royal Darwin Hospital, Darwin, Australia; [10]Burnet Institute, Melbourne, Australia; [11]The Alfred and Monash University Department of Infectious Diseases, Melbourne Australia; [12]Blacktown Mount Druitt Hospital, Sydney, Australia; [13]St Vincent's Hospital, Sydney, Australia

Background:
Retreatment occurred in 6% receiving direct-acting antivirals (DAAs) for hepatitis C virus (HCV) through Australia's unrestricted access scheme during 2016-2019. However, retreatment reasons and outcomes, including among people who inject drugs (PWID), were unknown.

Methods:
Real-world effectiveness of antiviral therapy in chronic HCV (REACH-C) is an observational study representing 14% DAA initiations in Australia across 33 diverse sites between March 2016-June 2019. Retreatment data were collected until October 2020. Reinfections were documented at SVR (treated/untreated) and post-SVR (treated only).

Results:
Of those commencing DAAs (n=10843), 16% (n=1775) were PWID (injected drugs last six-months), 65% (n=7007) non-PWID, and 19% (n=2061) unknown-PWID. Compared to non-PWID, PWID were younger (median age 43 vs 53), male (76% vs 67%), opioid agonist recipients (44% vs 11%), and incarcerated (11% vs 5%). Per-protocol SVR for initial treatment was lower in PWID vs non-PWID (93.5% vs 95.2%; p=0.015). Among those with treatment failure, reinfection accounted for 19% (n=17/88) and 1% (n=3/302) among PWID and non-PWID. Retreatment uptake for treatment failure among PWID and non-PWID was similar (56% vs 58%).

Overall, retreatment occurred more in PWID than non-PWID (7% vs 3%; p<0.001). Reinfection accounted for 60% (n=73/122) retreatments in PWID vs 4% (n=7/183) non-PWID. Most retreated reinfections among PWID (89%) occurred post-SVR. PWID were retreated mostly in primary care (47%; 58/122) or prison (34%; 41/122). Non-PWID were retreated mostly in tertiary care (80%; 147/183). There was no significant difference in per-protocol SVR for retreated reinfection (94% vs 100%; p=1.000) or virological failure (87% vs 79%; p=0.573) in PWID vs non-PWID. There was no significant difference in per-protocol SVR for PWID retreated in primary, tertiary or prison settings (93% vs 95% vs 82%; p=0.088).

Conclusion:
Retreatment among PWID is effective and can be delivered in non-tertiary settings. Continued efforts to enhance retreatment uptake among PWID are needed for HCV elimination.

Disclosure of Interest Statement:

The Kirby Institute is funded by the Australian Government Department of Health and Ageing. The views expressed in this publication do not necessarily represent the position of the Australian Government.