

# Uptake of Hepatitis-C Direct-Acting Antiviral Treatment Among Individuals with HIV Co-Infection in Australia

Nima Iranpour, Gregory J Dore, Marianne Martinello, Gail V Matthews, Jason Grebely, Behzad Hajarizadeh  
 The Kirby Institute, UNSW Sydney, Sydney, Australia

## Introduction

- Individuals with human immunodeficiency virus (HIV) are at increased risk of hepatitis-C virus (HCV) coinfection given the common mode of transmission.
- In Australia, a Government-funded interferon-free direct acting antiviral (DAA) treatment program for chronic HCV infection has been available since March 2016, providing access to DAA treatment for all people with HCV, including those with HCV-HIV co-infection
- Among people living with HIV in Australia, an estimated 89% were diagnosed, and 88% of those diagnosed were on antiretroviral therapy (ART).

## Aim

This study assessed DAA treatment uptake among individuals with HIV-HCV co-infection during the first year of access to DAA in Australia

## Methods

- The PBS receives the administrative records of dispensed prescriptions from pharmacies across Australia. PBS data consisting of prescriptions of DAA treatment and ART, dispensed from March 2016 to March 2017 were used for all analyses.
- All individuals dispensed at least one ART or DAA prescription between March 2016 and March 2017 were included in the analysis of treatment uptake. For treatment completion analysis, individuals whose end of treatment due date was in February 2017 or later were excluded.
- Individuals dispensed ART regimen only, DAA regimen only and both ART and DAA regimens were categorised as individuals with HIV mono-infection, HCV mono-infection, and HIV-HCV co-infection, respectively.
- Among individuals with HIV-HCV co-infection (dispensed ART and DAA regimens), the distribution of gender, age, residence area (rural/regional versus urban), prescribed DAA regimen, and prescriber type were assessed.
- For each prescriber, their patient-load was calculated, using the number of individuals initiated on DAA treatment by that prescriber. Prescribers who initiated DAA treatment for 1-3 individual, for 4-9 individuals and for  $\geq 10$  individuals; were defined as low, medium and high case-load prescribers respectively
- Individuals with DAA treatment "completion" were defined as those who were dispensed the complete course of prescribed regimen.
- Individuals with "definite non-completion" were defined as those who were dispensed four weeks treatment in individuals initiated on an eight-week or 12-week regimen, dispensed eight weeks treatment for individuals initiated on a 12-week sofosbuvir+daclatasvir regimen, or dispensed four to eight weeks treatment in those initiated on a 24-week regimen.
- Individuals with "probable non-completion" were defined as those dispensed eight weeks treatment in individuals initiated on a 12-week sofosbuvir/ledipasvir regimen or dispensed 12 to 20 weeks treatment in individuals initiated on a 24-week regimen.
- The latter group was called "probable non-completion" given that receiving an incomplete treatment course could be due to patient's withdrawal (true non-completion) or the prescriber's decision to shorten the treatment course after re-assessment of the patient.
- Individuals dispensed regimens other than sofosbuvir/ledipasvir or sofosbuvir+daclatasvir were not included in this analysis given the small number.

## Results

- During March 2016- March 2017, a total of 935 individuals with HIV-HCV coinfection initiated DAA treatment, with 93% to 97% completing their prescribed course.
- Estimated DAA treatment uptake in the HIV-HCV co-infected population was 42%.
- 64% of DAA prescriptions were by specialists, 25% by GPs, and 11% by other prescribers.
- The proportion of individuals initiated on DAA by GPs increased from 20% in March/April 2016 to 26% in January-March 2017.
- Most specialists (77%) and GPs (72%) initiated DAA treatment for 1-3 patients.
- Among individuals initiated on DAA by GPs, 68% received their ART prescription from the same GP.

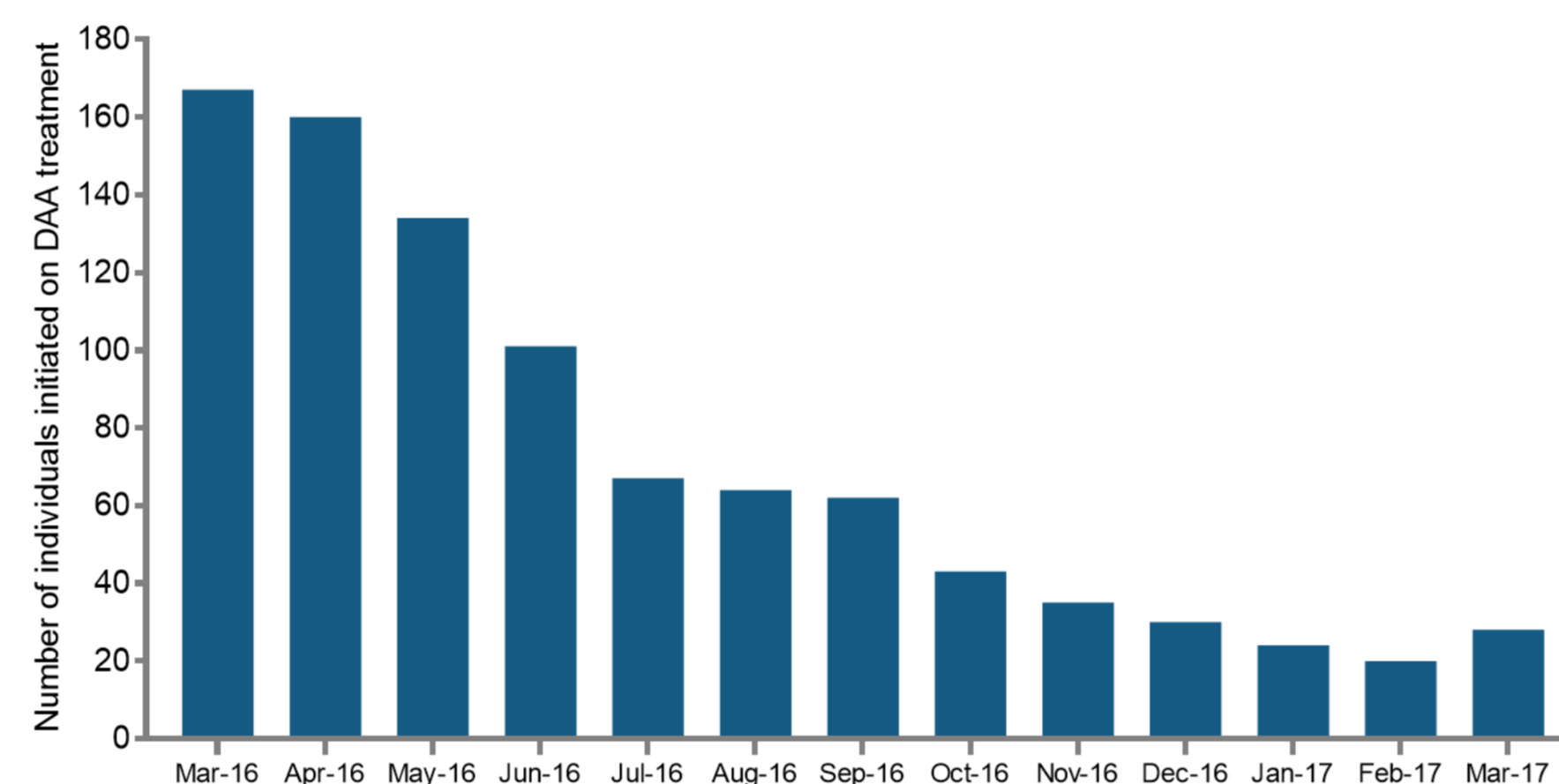


Figure 1: Monthly number of individuals with HIV-HCV co-infection, initiating DAA treatment during March 2016 to March 2017 in Australia.

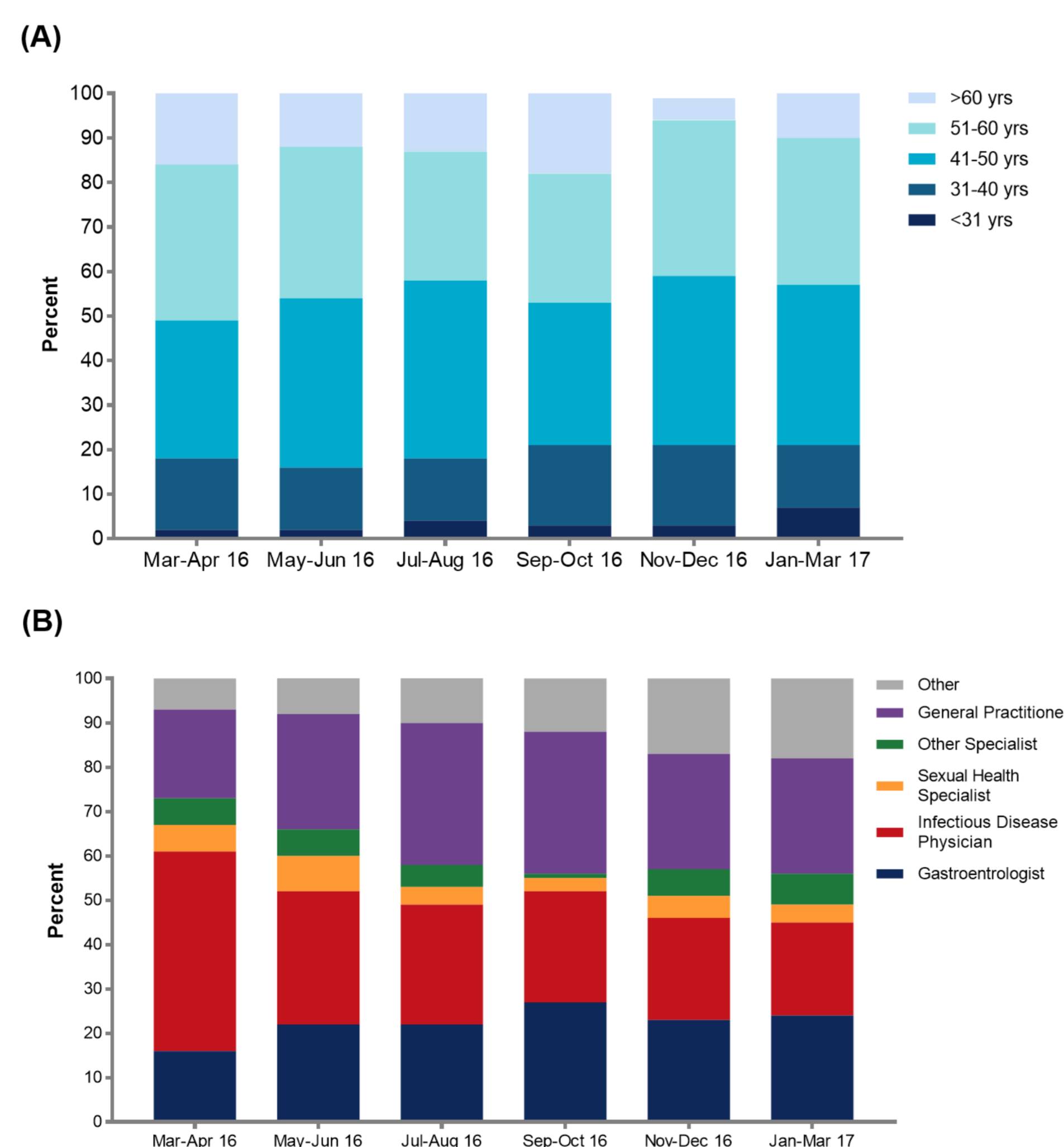


Figure 2: Distribution of individuals' age (A) and prescriber type (B) among individuals with HIV-HCV co-infection, initiating DAA treatment during March 2016 to March 2017 in Australia, by month of treatment initiation

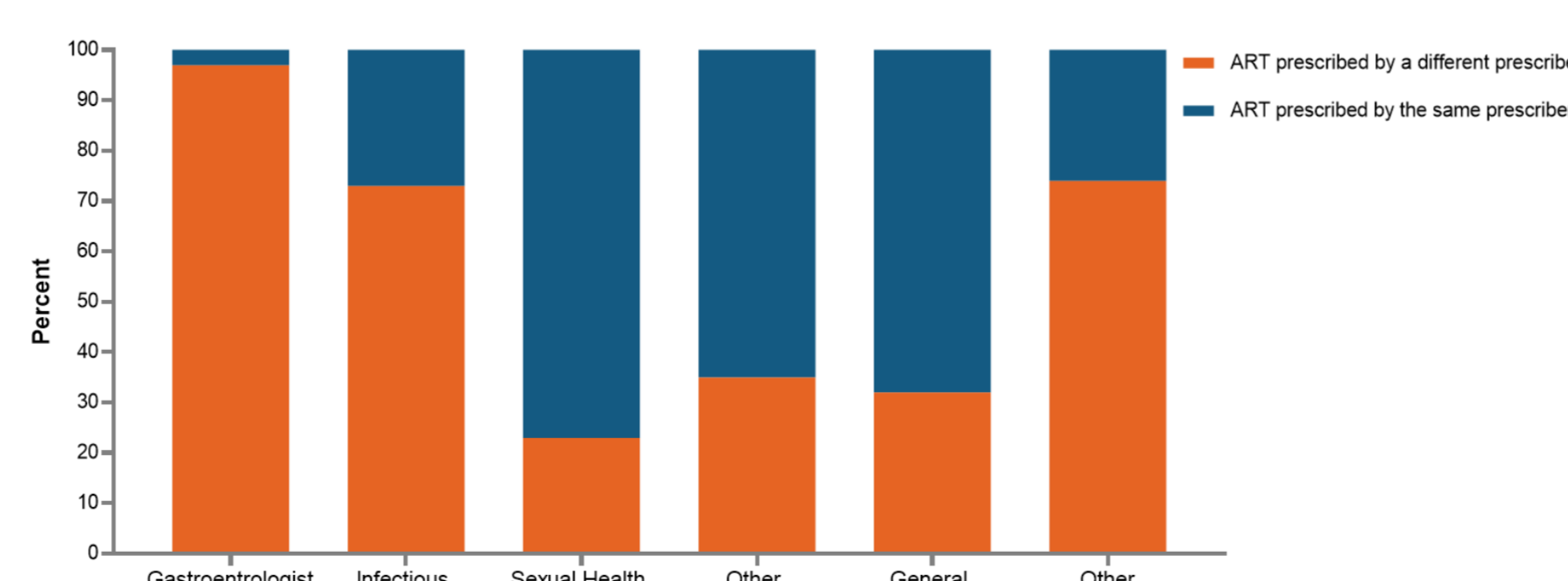


Figure 3: Distribution of individuals who received their DAA and ART prescriptions from the same (blue) or different (orange) prescriber, by prescriber type.

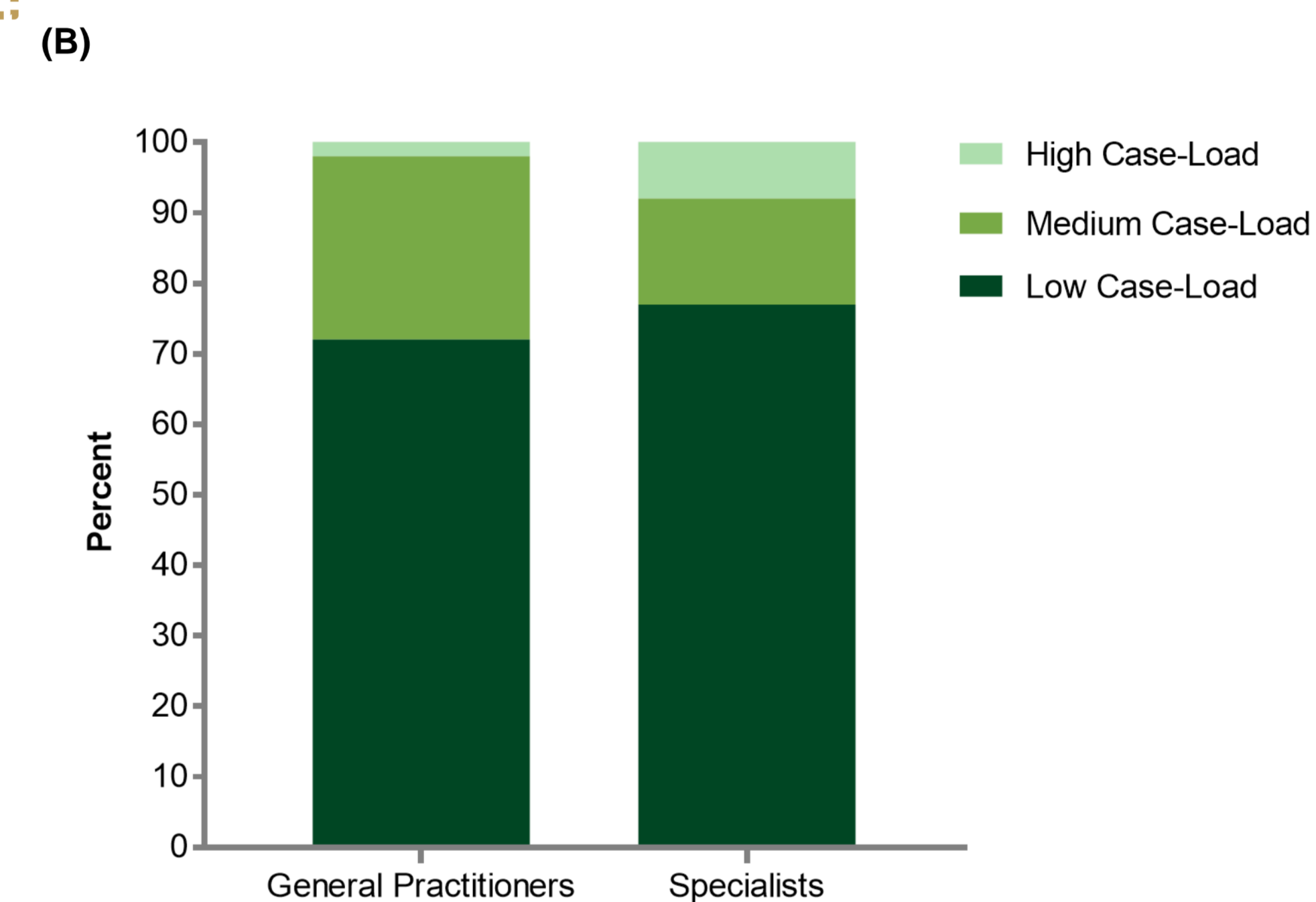
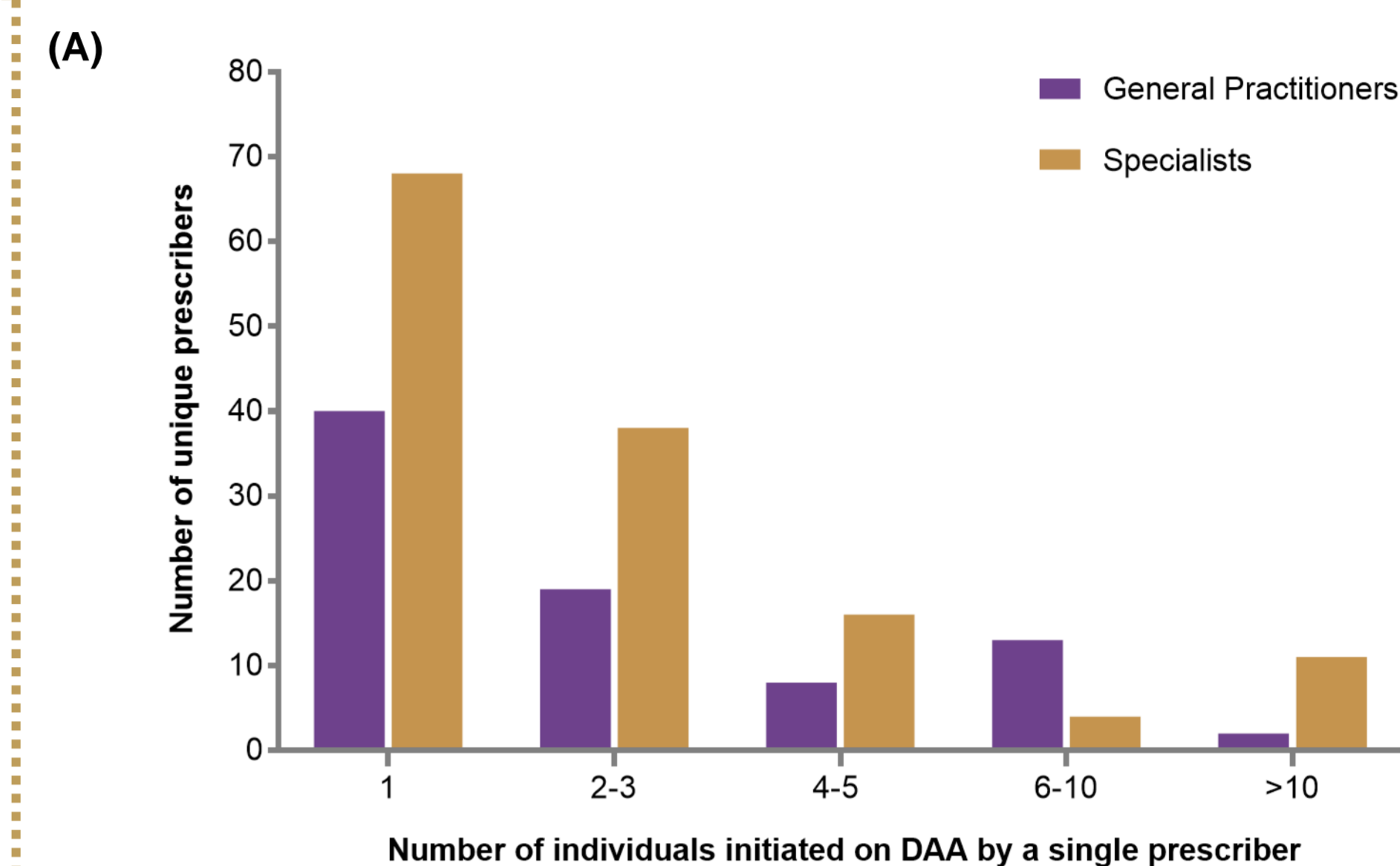


Figure 4: Absolute frequency (A) and relative frequency (B) of individuals initiated on DAA treatment by a unique prescriber, by prescriber type. The prescribers who initiated DAA treatment for 1-3 patients, for 4-9 patients, and for  $>10$  patients were considered as low, medium, and high case-load prescribers, respectively.

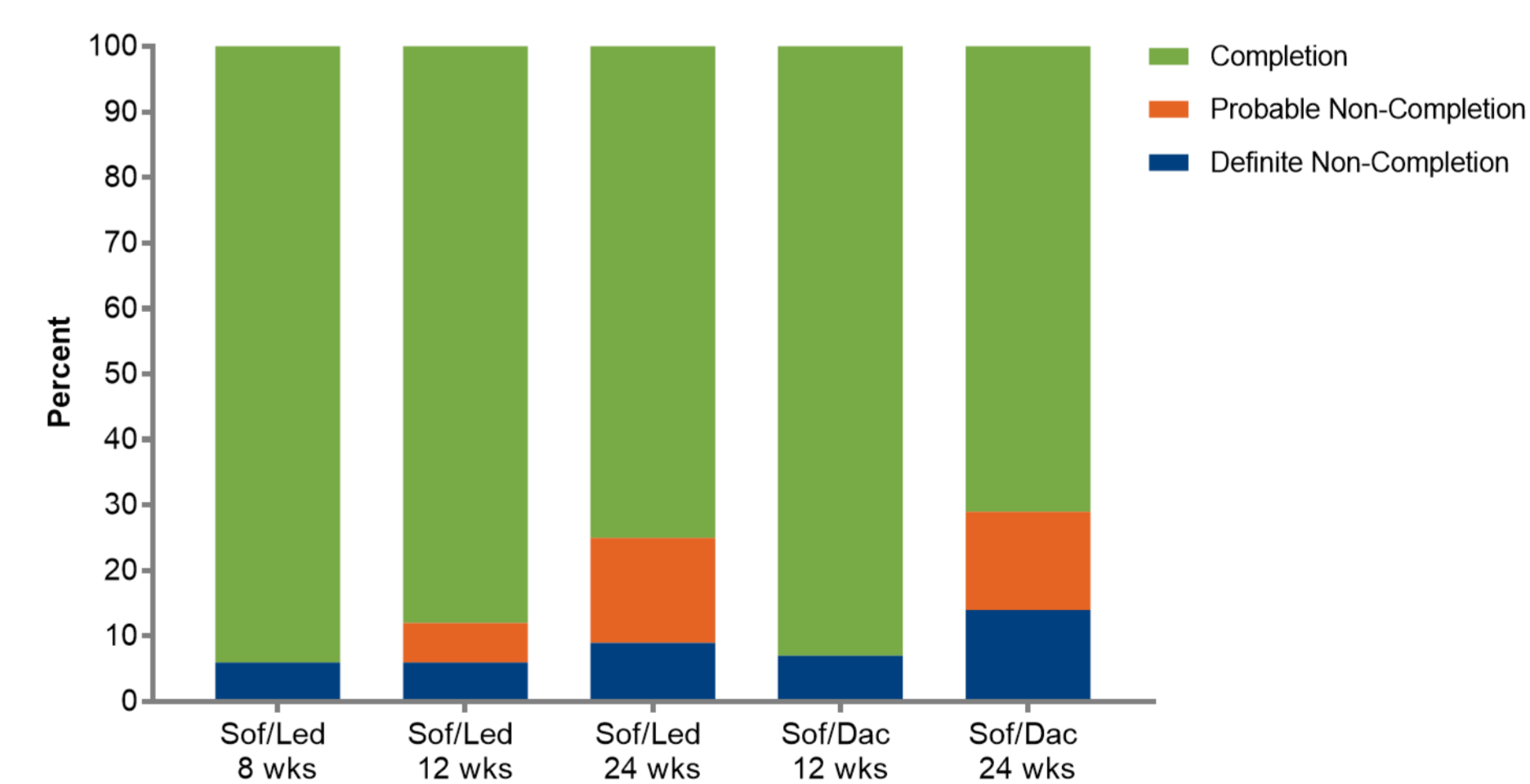


Figure 5: Distribution of DAA treatment course completion among individuals with HIV-HCV coinfection, initiating sofosbuvir/ledipasvir or sofosbuvir+daclatasvir during March 2016 to March 2017 in Australia.

## Conclusion

- There was a high level of DAA treatment uptake and treatment completion among individuals with HIV-HCV co-infection during the first year of unrestricted DAA access in Australia.
- A quarter of individuals initiating treatment were prescribed DAA by GPs while the proportion of prescriptions by GPs increased over time, important for broadening access to treatment.
- Ongoing analysis of PBS data is required to monitor treatment uptake in the following years.

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