

# Prescribing trends of direct acting antivirals (DAAs) for the treatment of hepatitis C in Ontario, Canada

## Background

- Chronic hepatitis C virus (HCV) infection affects over 250,000 Canadians and accounts for more years of life lost than any other infectious disease in the country.
- In 2012, direct acting antivirals (DAAs) were approved for the treatment of HCV in Canada and with cure rates greater than 95%, the growing use of these agents has been associated with declining HCV-related hospital admissions.
- Given the changing reimbursement mechanisms and treatment guidelines, it is important to understand the characteristics of individuals prescribed DAAs and the specialty of prescribing physicians.

### Reimbursement mechanisms and treatment guidelines for DAAs have changed on three occasions since 2012, including:

- Initial coverage through the exceptional access program (EAP) in April 2015,
- A subsequent move to the general formulary as limited use in February 2017, and
- The inclusion of newer agents on the formulary in February 2018.

## What did we investigate?

Characteristics of individuals who were prescribed DAAs and prescribing physicians' specialties in Ontario between 2012 and 2018.

## How was the study conducted?

- We conducted a repeated cross-sectional study examining prescription DAA claims reimbursed by the public drug program in Ontario between January 1, 2012 and December 31, 2018.
- Results were reported overall and by prescriber speciality for each quarter during the study period.
- A secondary analysis described the characteristics of individuals who received a publicly-funded DAA prescription in 2018, including demographic information, long-term care home status, major comorbidities, and past opioid exposure.

## Key points

- The rate of DAAs reimbursed by the Ontario Public Drug Programs experienced rapid and sustained growth that strongly correlated to changes in reimbursement, novel treatments, and treatment criteria over the 6-year study period.
- The majority of DAA recipients received their prescriptions from specialty prescribers.

### For more information

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This project was completed in collaboration with the Toronto Community Hep C Program.

## What did we find?

- Between January 1, 2012 and December 31, 2018, there were 27,116 individuals who received a publicly-funded DAA prescription.

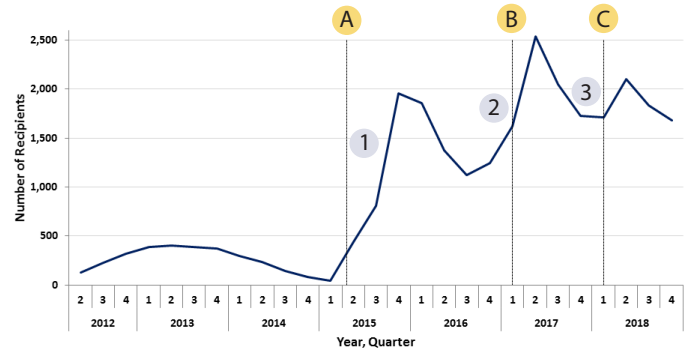


Figure 1: DAA dispensing among public drug beneficiaries from 2012 to 2018, by quarter

- There was a sharp increase in dispensing subsequent to the inclusion of DAAs in the EAP in Q2-2015, peaking at 1,956 in Q4-2015.
- DAA recipients then steadily declined until this trend reversed in Q4-2016, again peaking at 2,539 recipients in Q2-2017 following the transition of DAAs to the general formulary.
- Subsequently, the number of DAA recipients again declined, excluding a peak of 2,101 recipients in Q2-2018 following the addition of newer DAA agents on the formulary.

- Nearly half (n=12,521; 46.2%) of all DAAs were prescribed by gastroenterologists and hepatologists, followed by infectious disease specialists (n=5,292; 19.5%), other specialties (n=4,714; 17.4%), and general practitioners (n=2,481; 9.1%).
- In 2018, there were 5,538 individuals who received a publicly-funded DAA prescription. The majority of these individuals were above the age of 50 (59.8%), male (63.8%), resided in an urban area (88.8%), or belonged to the lowest two neighborhood income quintiles (63.8%).
- Among DAA recipients in 2018, 55.2% also had a mental health diagnosis and 28.7% were receiving OAT.

## Recommendations

### Policymakers

- Policymakers should consider strategies to expand access to community-based models of care, which may be better equipped to provide the comprehensive and flexible support required by some HCV patients, compared to specialist care providers.

### Healthcare professionals

- Healthcare professionals are encouraged to seek educational training to increase their capacity to better address the needs of complex clients and ensure successful treatment outcomes.