

Total HCV patients treated with direct acting antivirals since 2014

Alexis Voeller, Devin Razavi-Shearer, Ivane Gamkrelidze, Kathryn Razavi-Shearer, Sarah Blach, Homie Razavi

Center for Disease Analysis Foundation, Lafayette, CO, United States

INTRODUCTION

The introduction of second generation direct-acting antiviral treatments (DAAs) in 2014, created a renewed sense of urgency to treat HCV. These medications became the gold standard for HCV treatment as they have a higher sustained viral response (SVR) rate in comparison to pegylated interferon. As more and more patients were cured with this new subset of drugs, the demand for DAAs has increased since 2014. Although there continues to be an increase in uptake of DAA treatments, a larger unmet need for treatment has remained.

AIM

Our objective was to quantify the increase in cumulative HCV treatment in 2014-2022 due to the increase in HCV treatment patterns globally due to second generation DAAs.

MATERIAL & METHOD

The number of treated patients was estimated through national databases, drug sales data, government reports, reporting from treatment centers and drug supplier reports.¹ Data was also collected from experts in over 100 countries through Polaris Observatory annual surveys.²

- Prior to 2019, average SVR rate was used to determine the percentage of patients treated with DAAs in each country
 - National registration data were used to allocate treated patients to specific regimens.
 - Sofosbuvir (SOF), ombitasvir + paritaprevir + ritonavir, glecaprevir + pibrentasvir, and elbasvir + grazoprevir based treatments
- Most treated patients were in high-income countries in 2014-2018 where drug sales data were available and analyzed.

RESULTS

Between 2014-2022, 13.2 million HCV patients have been treated cumulatively, globally with DAAs.

- 10.9 million of these patients were treated with SOF-based regimens.
- SOF-based regimens account for 82% of all HCV treatments.

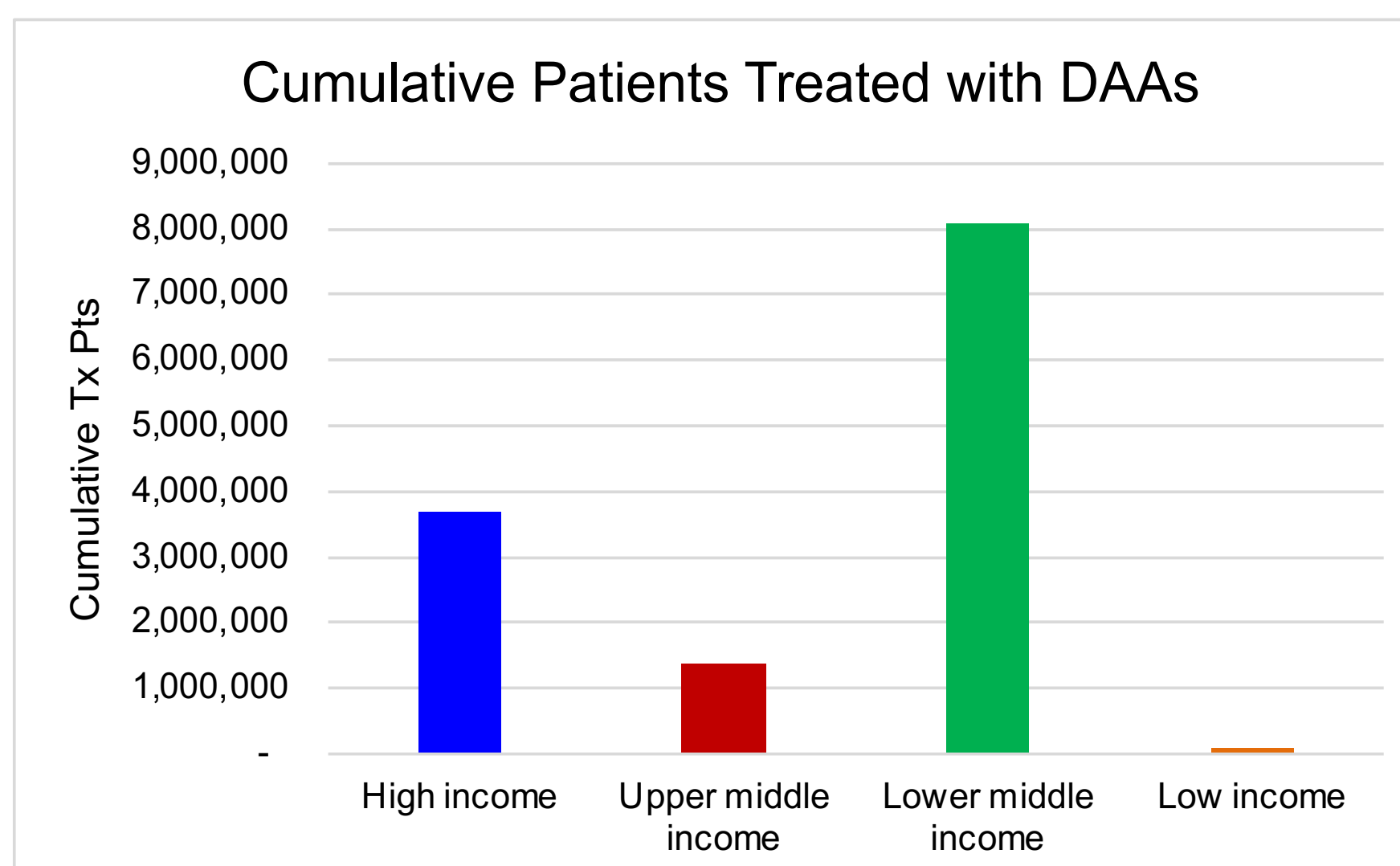
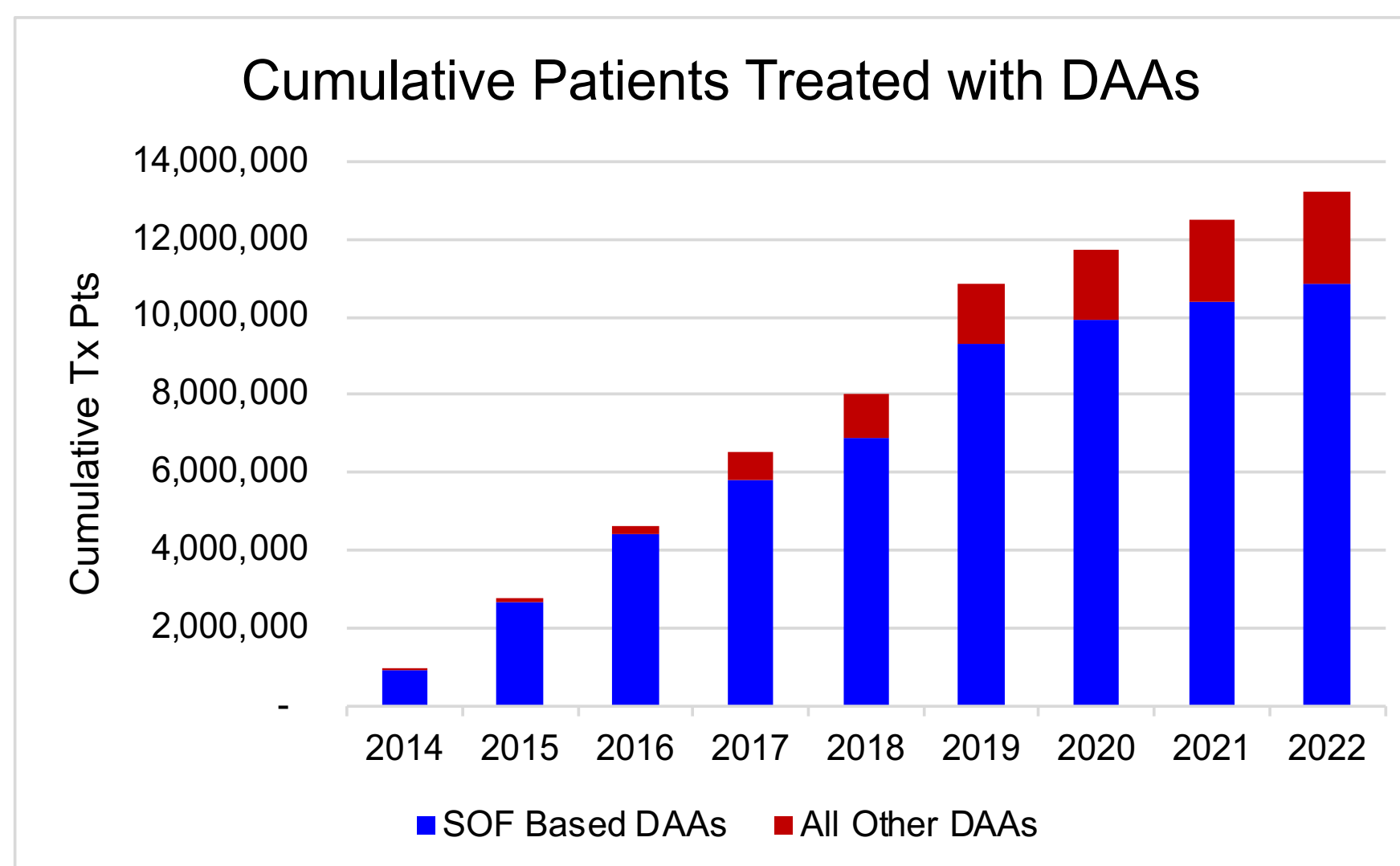
Most HCV treatments took place in lower-middle income countries.

- 8 million treatments were in lower-middle income countries.
- 3.7 million treatments were in high income countries.

The peak percentage of SOF-based regimens in 2019 was due to the substantial uptake in HCV treatments during the Egyptian elimination program.

There has been an increase in other DAAs starting in 2019.

- In 2019 there were 1.6 million patients cumulatively treated with other DAAs compared to 2.4 million cumulative patients in 2022.



	2020	2021	2022
Total Treated	636,100	478,710	463,370
Cum. Tx since 2014	11.73 million	12.48 million	13.22 million
HIC Total Tx	315,800	265,580	266,660
UMIC Total Tx	150,600	186,180	188,390
LMIC Total Tx	380,600	275,460	257,950
LIC Total Tx	24,840	22,190	28,480

CONCLUSION

Access to DAAs in low- and middle- income countries (LMIC) has had a profound impact on the total number of HCV patients treated globally.

- Generic sofosbuvir + daclatasvir is the dominant DAA treatment.

With 89% of all HCV infections in LMIC, immediate access to generic versions of the latest treatments is needed to achieve global elimination targets.

High income-countries have been very proactive in treating their HCV infected populations and removing all treatment restrictions.

To achieve the global elimination of HCV, there needs to be a continued exponential increase in cumulative treated patients in LMIC.

- This includes continued expansion of generic access to medications and removal of fibrosis restrictions.

REFERENCES

- ¹Blach S, Terrault NA, Tacke F, et al. Global change in hepatitis C virus prevalence and cascade of care between 2015 and 2020: a modelling study. *The Lancet Gastroenterology & Hepatology* 2022; 7(5): 396-415.
- ²Polaris Observatory. The authoritative resource for epidemiological data, modeling tools, training, and decision analytics to support global elimination of hepatitis B and C by 2030. 2023.

DISCLOSURES

Financial support was provided by the Polaris Observatory by grants from the John C. Martin Foundation.

CONTACT INFORMATION

Alexis Voeller, avoeller@cdafound.org
 Center for Disease Analysis Foundation, Lafayette, CO USA