

AUSTRALIA COULD MEET THE WHO HCV ELIMINATION TARGETS IF THE CURRENT ROLLOUT OF DAA TREATMENT IS CONTINUED

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Background: In 2015, of 227,000 people living with chronic HCV in Australia, an estimated 32,400 people initiated direct acting antiviral (DAA) treatment in 2016. We estimated the future impact of this DAA program in reducing the prevalence, transmission, and morbidity of chronic HCV to evaluate whether Australia can meet WHO HCV elimination targets.

Methods: We used a mathematical model and assumed three different future treatment coverage scenarios over 2016-2030: *optimistic*, 30,000 continues each year 2016-2030; *intermediate*, treatment numbers drop moderately: 30,000 (2016), 26,000 (2017), 21,000 (2018), then 17,000 (2019-2030); and *pessimistic*, treatment drops markedly; 30,000 (2016), 17,000 (2017), 13,000 (2018), then 13,000 (2019-2030), with comparison to a status-quo scenario where treatment remains at 2015 levels (7,300). Treatment rates initially varied by disease stage (higher for advanced fibrosis), but were assumed uniform across HCV transmission risk level sub-populations.

Results: By 2030, we estimate the intermediate DAA treatment scenario would avert 37,950 (30,510–45,950) new HCV infections, 10,350 (7,000–12,810) liver-related deaths, and 11,990 (9,640–13,790) HCC cases, equating to a 100% (82–100%), 52% (42–63%) and 64% (43–79%) reduction. The model estimates that under the intermediate scenario Australia will meet WHO targets of 80% of eligible people on treatment by the year 2027, 90% reduction in annual incidence by the year 2028, and 65% reduction in annual liver-related deaths by the year 2025. The pessimistic scenario will delay meeting the targets by 4-5 years, and the optimistic scenario will bring it forward by 3-5 years.

Conclusion: Based on a realistic uptake scenario Australia should meet the WHO HCV elimination targets in 10-13 years, even with a moderate reduction of DAA treatment uptake. Achieving these targets requires treatment access for high risk HCV transmission populations, in conjunction with current harm reduction activities and HCV testing strategies.

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