

Sex and gender differences in HCV notification trends

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Background: Australia has made significant progress towards achieving the World Health Organization's elimination targets for hepatitis C. By end 2022, an estimated 74,400 people were living with chronic hepatitis C, a reduction of 54% compared to 2015. However, progress on HCV incidence is less well understood. We aimed to assess the age and gender differences in HCV incidence in Australia by analyzing notification trends where younger age HCV notifications are a surrogate measure to evaluate trends in incidence.

Methods: We analysed monthly HCV notification data recorded in the National Notifiable Disease Surveillance System from January 2009 to December 2023. Trends in total and younger age (15-24 years) HCV notifications, including by gender were examined. Piece-wise Poisson regression analysis was used to assess trends over time.

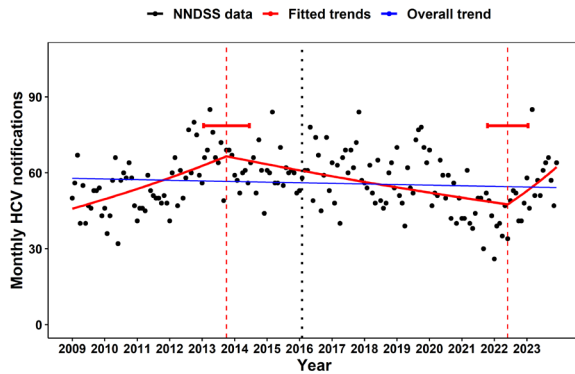
Results: The overall population notifications were steady until December 2016 (annual rate ratio (ARR) = 1.01) before falling (ARR=0.91) up until February 2022, since then there has been a marked increase (ARR=1.06) to December 2023, equivalent to a 6% increase per year. This increase in overall notifications during 2022 was predominantly due to an increase in notifications among the male population since July 2022 (ARR=1.20, Figure 1(A)). In contrast, HCV notifications in the younger age female population continued to decline (ARR=0.90 since January 2013, Figure 1(B)).

Conclusion: An increase in HCV notifications among the younger male population was observed after July 2022, contributing to an overall increase in HCV notifications. This could reflect either an increase in HCV incidence among males or increased HCV screening, possibly due to enhanced testing programs in prison-based settings. Further investigation is required to comprehend the mechanisms behind these diverging notification trends and inform potential strategies for reducing increases in incidence.

Disclosure of Interest Statement: GJD has received research grant funding from Gilead and Abbvie. JG is a consultant/advisor and has received research grants from Abbvie, bioLytical, Cepheid, Gilead, and Hologic. RTG and AJK have provided project advice for Gilead.

Figure 1: Monthly national HCV notifications in Australia from January 2009 to December 2023 [black points: HCV notification data from National Notifiable Diseases Surveillance System (NNDSS), blue line: overall trend, red line: segmented regression trend, vertical black-dotted line: 1st March 2016 when subsidized DAA became available, vertical red-dotted line: year of change point, red horizontal error bar: 95% CI for change point]; A) HCV notification trends among male (15-24 years); B) HCV notification trends among female (15-24 years);

(A)



(B)

