

MORTALITY TEN YEARS BEFORE AND AFTER THE INTRODUCTION OF DIRECT ACTING ANTIVIRALS FOR PEOPLE IN SCOTLAND WITH HEPATITIS C INFECTION: A POPULATION COHORT STUDY

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Background

Direct-acting antivirals (DAAs) have transformed the treatment of Hepatitis C Virus (HCV) infection, enabling countries to pursue HCV elimination. Studies have reported a decline in the incidence of severe liver-related events in the HCV population, but it remains unclear how overall mortality has changed, since DAAs were introduced. Here, we describe how all-cause, liver-related and drug-related mortality in Scotland has changed in the HCV population since DAAs became available.

Methods

A retrospective national cohort, comprising individuals diagnosed with chronic HCV, was created and linked to mortality registry data in Scotland. Patient follow-up time was partitioned into calendar year and five-year current age groups using Lexis expansion. Adjusted mortality rate ratios (aMRRs) for each year relative to 2015 (i.e. year of DAA introduction) were calculated using Poisson regression. All estimates were adjusted for area-based deprivation, current age, health board and gender. Our analysis focused on years 2005 to 2024, ten years before and after DAAs became available.

Results

This study included 28,759 individuals with chronic HCV, of which 8930 died during follow-up. The crude mortality rate was 2.67 deaths per 100 person years. Mortality rates increased substantially from 2013 up to 2021. In 2021, overall mortality was 39% higher than in 2015 (aMRR: 1.39; 95%CI: 1.25-1.48; P<0.001). Rising mortality was driven by drug-related causes. The rate of drug mortality more than doubled between 2015 and 2021 (aMRR: 2.15; 95%CI:1.81-2.55; P<0.001). Conversely, liver mortality rates have been declining steadily and were >50% lower in 2024 than in 2015 (aMRR: 0.47;95%CI:0.38-0.59; P<0.001).

Conclusion

In Scotland, mortality in the HCV population has risen overall since DAAs were introduced. This increase, fuelled by drug related death, has overshadowed a major reduction in liver mortality. These data highlight the importance of a multifaceted public health response to, and broader monitoring of, HCV elimination.

Disclosures

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