

HEPATITIS C VIRUS (HCV) MORTALITY ATTRIBUTION BY BIRTH COHORT: BRITISH COLUMBIA HEPATITIS TESTERS COHORT (BC-HTC)

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Introduction: We report the causes of death by birth cohort among HCV-infected people to understand the relative contributions of HCV acquisition risks, viral sequelae, and other mortality causes.

Methods: The BC-HTC includes individuals tested for HCV or reported to public health as a HCV case from 1990-2013 linked to their corresponding administrative data. ICD-10 codes were used to classify mortality as: 1) liver-related (including decompensated liver disease, liver cancer, HCV, HIV-related, non-alcoholic and alcoholic liver disease, other types of hepatitis); 2) acquisition risk-related (including drug-related); and 3) all other mortality causes. We computed mortality proportions by birth cohort: born <1945, 1945-64 and ≥1965.

Results: Of 1,135,947 individuals in the BC-HTC, 67,726 (6.0%) were HCV positive. Overall, 17.6% (11,945/67,726) of HCV positive vs. 7.5% (79,840/1,068,221) of HCV negative individuals died. Median age at death was 55 vs. 74 yr., respectively. Causes of death for the <1945, 1945-64 and ≥1965 birth cohorts, respectively, were: 1) liver-related: 5.8% (3,591/61,578), 17.7% (4,239/23,984) and 9.8% (610/6,223); 2) acquisition risk-related: 0.2% (127/61,578), 6.1% (1,464/23,984) and 18.9% (1,173/6,223); and 3) all other mortality causes: 94.0% (57,860/61,578), 76.2% (18,281/23,984) and 71.4% (4,440/6,223). In summary, compared to the ≥1965 birth cohort, the 1945-64 cohort had a lower proportion of deaths due to HCV acquisition risks (18.9% vs. 6.1%) but a higher proportion of liver-related deaths (9.8% vs. 17.7%).

Conclusions:

HCV acquisition risks combined with viral sequelae reduced the median lifespan by 19 yr. Those born ≥1965 were more likely to die from HCV acquisition risks than from HCV infection sequelae, whereas the opposite was true for the 1945-64 cohort. Curative HCV treatment, while likely to reduce deaths from HCV viral sequelae, will not reduce acquisition risk mortality, confirming the need for comprehensive harm reduction programming to reduce overall mortality.

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