INCREASING DRUG-RELATED MORTALITY OVER THE LAST DECADE AMONG SCOTLAND'S HCV-DIAGNOSED PWID POPULATION

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Background: To meet the WHO hepatitis elimination goals for 2030, scaling-up testing/diagnosis of hepatitis C virus (HCV) infection and broadening direct-acting antiviral treatment to people who inject drugs (PWID) is essential. Although such programmes are expected to avert severe liver sequelae and deaths in this population, mortality due to competing drug-related (DR) causes might increase. Our objective was to characterise temporal trends in DR mortality rates among HCV-diagnosed PWID in Scotland over the past decade, and to investigate factors associated with DR mortality.

Methods: This retrospective longitudinal cohort study linked Scotland's national HCV Diagnosis Database and deaths registry; study cohort consisted of all individuals without reported non-PWID route of HCV acquisition who were diagnosed with HCV in 2009–2018. We used Lexis expansion to adjust for ageing cohort effects and calculated the mortality rate from an underlying DR cause. We fitted Poisson regression models to estimate the temporal trend adjusting for attained age, sex, referral setting, region, and viraemic status.

Results: Overall among the study population (n=16865; 246,900 person-years), a total of 1908 DR deaths occurred; the DR mortality rate increased from 5.4/1000 [101 deaths] in 2009, to 11.8/1000 [343] person-years in 2018. Increasing trends were observed for all age-groups except 55+ years (Fig.). The overall DR mortality rate was highest for referrals from prison (10.8/1000) and drug/counselling services (8.5/1000). Significantly increased mortality was observed over the analysis period (adjusted rate ratio (RR) of 1.12/year, 95% CI:1.10-1.14) for older age (35-39: RR=1.33, 1.17-1.51; 45-49: RR=1.21, 1.05-1.40), compared with <35 years, and for prison, drug/counselling and GP/hospital referrals (RRs 1.32 to 1.69).

Conclusion: Increasing drug-related mortality rates in Scotland over the past decade are not due to an ageing cohort. Services will need to adapt to reduce mortality risk in PWID, and HCV elimination strategies need to work with those addressing wider health harms for PWID.

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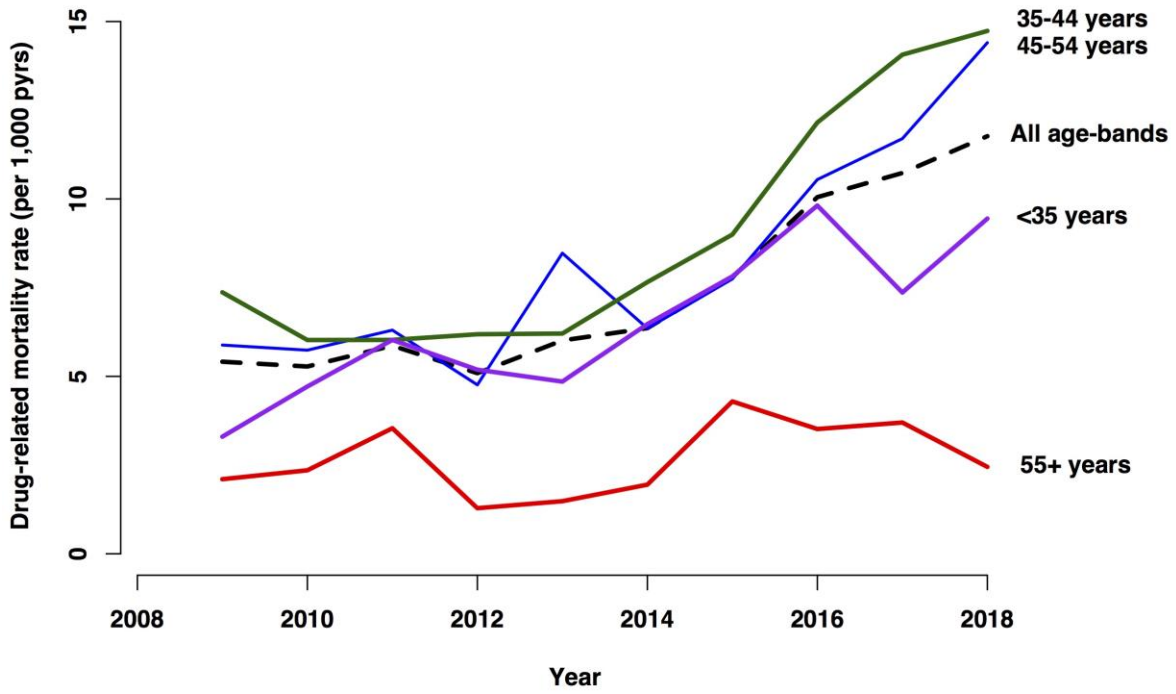
Drug-related mortality rate (per 1,000 pyrs)
0
5
10
15
2008
2010
2012
2014
2016
2018
Year
35-44 years
45-54 years
All age-bands
<35 years
55+ years