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Projecting severe sequelae of injection-related hepatitis C virus epidemic in the UK. Part 2: Preliminary UK estimates of prevalent injection-related hepatitis C carriers, and derivation of progression rates to liver cirrhosis by gender and age at hepatitis C virus infection.

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Abstract

BACKGROUND: In Part 2, we illustrate how available data can be used to obtain preliminary estimates for Scotland of prevalent injection-related hepatitis C carriers and of maternally hepatitis C virus (HCV)-infected infants. Novel approaches to reducing uncertainty about the number of Scotland's HCV infected children of injector parents are discussed in brief. Three approaches, one direct and two indirect, to estimating the number of current and ever-injectors are presented for England and Wales.

METHODS: Diagnosed HCV infections in injectors and HCV test uptake by current injectors are combined with survey estimates for the ratio of ever-injectors to current injectors to estimate prevalent injection-related hepatitis C carriers. Household surveys give direct but potentially biased estimates of the number of current and ever-injectors. Indirect estimates make use of hepatitis C diagnoses in injectors, HCV prevalence and test-uptake by injectors, or exploit international comparisons. We comment on key reporting problems that inhibit synthesis of HCV progression studies; and suggest how to derive preliminary gender-and-age specific progression rates to liver cirrhosis for use in projections.

RESULTS: Preliminary estimates for Scotland of prevalent injection-related hepatitis C carriers are: central estimate 39,000, inner uncertainty 16,000-59,000; of maternally hepatitis C virus (HCV)-infected infants central estimate 260, uncertainty 110-1100; and for England and Wales estimates of the number of prevalent ever-injectors are central estimate 360,000, uncertainty 240,000-835,000. Both hepatitis C prevalence in injectors and estimated numbers of current injectors are similar in Australia, and England and Wales (but not so for Scotland), Australian work on projections of severe HCV sequelae from hepatitis C infections may therefore be a suitable starting point for projections for England and Wales. Australia anticipates a doubling in the number of persons living with hepatitis C cirrhosis from 8500 in 1997 to over 17,000 in 2010.

DISCUSSION: Australian projections of severe HCV sequelae used progression rates that, for simplicity, were independent of gender and of age at HCV infection. Faster HCV progression for males, and their higher injector prevalence, means that the impact of HCV infection on, for example, liver cancer may be evident to a greater extent and earlier in males.

MeSH Terms, Substances



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