

## The importance of preventing alcohol-related liver disease in the USA



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Deaths due to alcoholic liver disease are a leading contributor to the decrease in life expectancy in the USA that has been observed since 2014.<sup>1</sup> In *The Lancet Public Health*, Jovan Julien and colleagues<sup>2</sup> have projected that the health impact of alcoholic liver disease in the USA will likely increase with time, with the age-standardised deaths due to alcohol-related liver disease projected to almost double from 8.23 (95% uncertainty interval [UI] 7.92–9.29) per 100 000 person-years in 2019 to 15.20 (13.93–16.19) per 100 000 person-years in 2040.

While this modelling study provides an important warning to public health practitioners and policy makers in the USA, we must also bear in mind that the use of an aetiological approach to estimate the effect of alcohol on liver disease probably leads to an underestimation of the true burden of alcohol-attributable liver disease. Indeed, alcohol can also have a role in the development and progression of so-called non-alcoholic liver disease.<sup>4</sup> Accordingly, the key question that arises is what is the total effect of alcohol consumption on liver disease?

Information on how alcohol interacts with other risk factors to cause and progress liver disease is needed to estimate the total effect of alcohol consumption on liver disease. First, alcohol consumption can affect the risks associated with hepatitis B virus (HBV) and hepatitis C virus (HCV) infections by increasing risky behaviours and reducing the likelihood of spontaneous clearance of the infections.<sup>5</sup> Second, prospective cohort studies have found an association between alcohol intake and BMI to increase the risk of metabolic liver disease.<sup>6</sup> Regardless of fibrosis aetiology, alcohol consumption increases the risk of cirrhosis and complications of liver disease (including liver cancer). Although data on the interactions between alcohol and HBV, HCV, and BMI are scarce, the burden of liver cirrhosis and related deaths that are attributable to alcohol is thought to be substantial. For example, a study of patient admissions to hospital in France found that more than 70% of deaths due to decompensated liver cirrhosis in people with chronic HCV infection was attributable to alcohol.<sup>7</sup>

Another important consideration is the modifying role of socioeconomic circumstances. Although high-risk drinking has increased in the USA among all

sociodemographic groups, the effects on health of this increase are not the same for people in different socioeconomic strata. In particular, the burden of alcohol-related liver cirrhosis and liver diseases is disproportionately higher among those of lower socioeconomic status than among those of higher socioeconomic status, with alcoholic liver disease being one of the three categories of so-called deaths of despair.<sup>8</sup> Unfortunately, the population-level trends in alcoholic liver disease in Julien and colleagues' analysis are not stratified by socioeconomic status and so might be an underestimation of the future burden of alcoholic liver disease among people of lower socioeconomic status. Understanding socioeconomic patterns of alcohol-related liver disease will be especially important if economic inequality in the USA continues to increase.

Despite their analysis of trends in the burden of alcohol-related liver cirrhosis being restricted to alcoholic liver disease stratified by age and sex, and not by socioeconomic status, and recognising their other stated modelling assumptions and limitations, Julien and colleagues showed that the current and future health burdens of alcoholic liver disease necessitate public health attention and intervention.<sup>2</sup> However, the question remains of which interventions should be implemented to reduce the future health burden of alcoholic liver disease. As described by Julien and colleagues, interventions that target people with alcoholic liver disease are likely to be ineffective because the disease is often diagnosed at a late stage. Although promoted as effective and efficient intervention strategies, an increase in clinical and pharmacological treatment rates might be somewhat cost-ineffective due to the level of costs associated with these treatments and the low prevalence of people with alcohol use disorders who are diagnosed and receive treatment.<sup>9,10</sup> Another suggestion is the development of population-level alcohol use interventions based on population-level tobacco consumption interventions. Although such a strategy has the potential to decrease the burden of alcoholic liver disease, the time required to do such investigations is not realistic considering the immediacy of the need to decrease the burden. Therefore, in our

opinion, population-level interventions that decrease alcohol consumption, such as the WHO's Best Buys (ie, pricing policies and restrictions on alcohol availability and marketing),<sup>9</sup> are the most cost-effective strategies that could be implemented immediately to reduce the burden of alcoholic liver disease. Such interventions should not only reduce the burden of alcoholic liver disease, but also other diseases that are causally related to alcohol use.<sup>5,9</sup>

We declare no competing interests.

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