

## No level of alcohol consumption improves health

By use of methodological enhancements of previous iterations,<sup>1</sup> the systematic analysis from the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2016 for 195 countries and territories, 1990–2016,<sup>2</sup> is the most comprehensive estimate of the global burden of alcohol use to date. The GBD 2016 Alcohol Collaborators clearly demonstrate the substantial, and larger than previously estimated, contribution of alcohol to death, disability, and ill health, globally. In 2016, alcohol use was the seventh leading risk factor for both deaths and disability-adjusted life-years (DALYs), accounting for 2.2% (95% uncertainty interval [UI] 1.5–3.0) of female deaths and 6.8% (5.8–8.0) of male deaths. The burden is particularly borne among those aged 15–49 years, for whom alcohol ranks as the leading cause of DALYs. In this population, alcohol use was the leading risk factor globally in 2016, with 3.8% (3.2–4.3) of female deaths and 12.2% (10.8–13.6) of male deaths attributable to alcohol use.

The study considers the extent to which moderate levels of consumption are protective for some health conditions.<sup>34</sup> A paucity of estimates from meta-analyses identifying appropriate reference categories, adequately accounting for survival bias and other confounders, has meant previous assessments of the harm of alcohol have been potentially inaccurate.<sup>57</sup> However, the emerging literature can account for some of these issues, enabling more reliable estimates of the disease burden attributable to alcohol.<sup>89</sup> By implementing a novel method to establish a counterfactual level of exposure across varied relative risks that does not need to assume zero exposure, the authors present tangible evidence for low-risk drinking recommendations. The level of consumption that minimises an individual's risk is 0 g of ethanol per week, largely driven by the fact that the estimated protective effects for ischaemic heart disease and diabetes in women are offset by monotonic associations with cancer.

This latest GBD analysis applies state-of-the-art epidemiology to produce a definitive understanding of alcohol-related harm. More work remains to be done in calculating the impact of unrecorded alcohol consumption and the importance of patterns of drinking and binge drinking, particularly on young people. Furthermore, the harmful impact of alcohol extends beyond health into families, crime and disorder, and

the workplace.<sup>10</sup> Evidence demonstrating the range and magnitude of the harm of alcohol to those other than the drinker is increasingly emerging.<sup>11,12</sup> This additional array of harms is a necessary consideration at both national and local levels, when aiming to understand the full range of alcohol-related harm and ensuring adequate provision of public health policy with a wider impact than on health alone.

The conclusions of the study are clear and unambiguous: alcohol is a colossal global health issue and small reductions in health-related harms at low levels of alcohol intake are outweighed by the increased risk of other health-related harms, including cancer. There is strong support here for the guideline published by the Chief Medical Officer of the UK who found that there is “no safe level of alcohol consumption”.<sup>13</sup> The findings have further ramifications for public health policy, and suggest that policies that operate by decreasing population-level consumption should be prioritised.

The most effective and cost-effective means to reduce alcohol-related harms are to reduce affordability through taxation or price regulation, including setting a minimum price per unit (MUP), closely followed by marketing regulation, and restrictions on the physical availability of alcohol.<sup>10</sup> These approaches should come as no surprise because these are also the most effective measures for curbing tobacco-related harms, another commercially mediated disease, with an increasing body of evidence showing that controlling obesity will require the same measures.<sup>14</sup> These diseases of unhealthy behaviours, facilitated by unhealthy environments and fuelled by commercial interests putting shareholder value ahead of the tragic human consequences, are the dominant health issue of the 21st century. The solutions are straightforward: increasing taxation creates income for hard-pressed health ministries, and reducing the exposure of children and adolescents to alcohol marketing has no downsides. The outlook is promising: the UK has just embarked on a huge controlled natural experiment with a progressive evidence-based alcohol strategy in place in Scotland, and with similar measures planned in Northern Ireland and Wales, with England as the placebo control. MUP in Scotland was introduced in May, 2018, without so much as a whisper of complaint from the media, the public, and politicians. Mortality and morbidity rates



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