Report Title: *The burden of liver disease in Europe: a review of available epidemiological data*

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Summary

The past 30 years have witnessed major progress in the knowledge and management of liver disease, yet approximately 29 million people in the European Union still suffer from a chronic liver condition [1]. Difficulties in accessing data from individual countries hinder global evaluation of liver disease in Europe. ***The Burden of Liver Disease in Europe: A Review of Available Epidemiological Date*** reviews 260 epidemiological studies published in the last five years to survey the current state of evidence on the burden of liver disease in Europe and its causes.

The incidence and prevalence of two conditions, cirrhosis and primary liver cancer, are key to understanding the burden of liver disease. They represent the end-stage of liver pathology and thus are indicative of the associated mortality. Literature on the prevalence and incidence of cirrhosis is scarce, but available data suggest this disease is responsible for an estimated 170,000 deaths per year in Europe [2]. There are, however, large intra-European variations. About 0.1% of Hungarian males will die of cirrhosis every year compared with 0.001% of Greek females [2].

Hepatocellular carcinoma (constituting 70−90% of cases of primary liver cancer) is the fifth most common cause of cancer in Europe and one of the most serious outcomes of cirrhosis [3]. European epidemiological data show that there are 1-13 new cases of hepatocellular carcinoma and 1-10 deaths per 100,000 inhabitants per year. WHO estimate that liver cancer is responsible for around 47,000 deaths per year in the EU.

Alcohol consumption, viral hepatitis B and C and metabolic syndromes related to overweight and obesity are the leading causes of cirrhosis and primary liver cancer in Europe.

Alcohol is the main cause of liver disease, including liver cirrhosis. Alcohol consumption in Europe decreased during the 1990s, but increased and stabilized at a higher level between 2004 and 2006, with huge variations among European countries [4].

Chronic viral hepatitis B is the second major cause of both cirrhosis and liver cancer. Between 0.5% and 0.7% of the European population is affected by chronic hepatitis B, with the highest prevalence being recorded in Romania (5.6%) and Greece (3.4%) [5-12]. Throughout Europe, an average of only 23% of patients knew of hepatitis B at the time of their diagnosis [13]. Data suggest there has been a reduction in the yearly incidence of HBV, accompanied by a decline in prevalence related to the vaccination campaigns that have been mounted throughout Europe [12, 14].

Chronic hepatitis C is an important risk factor for hepatocellular carcinoma, which develops several decades after infection. Since the discovery of the virus in the late eighties, the number of new cases of infection has dropped substantially. Prevalence rates of hepatitis C virus (HCV) infection in the last

decade in the European population were between 0.13 and 3.26 %, the highest rates being found in Italy and Romania [5-7, 9, 15-17]. These HCV-infected populations will develop complications in the years to come, leading to a substantial increase in the burden of disease. It is of great concern that about 90% of people in Europe infected by viral hepatitis are unaware of their status [13].

Non-alcohol fatty liver disease (NAFLD) is becoming a major concern with the increasing incidence of obesity in Europe. In this condition, accumulation of fat in the liver leads to chronic liver disease. Available data suggest the prevalence rate of NAFLD is 2−44% in the general European population (including obese children) and 42.6–69.5% in people with type 2 diabetes [18-28].

Each of these four major causes of liver disease is amenable to prevention and treatment, reducing the burden of liver disease in Europe and saving lives. However, epidemiological data are scarce. Additional surveys are urgently needed to provide reliable information, without which it will not be possible to implement cost-effective prevention programmes and novel treatments to tackle liver disease and avoidable deaths in Europe.

A limited number of hard copies of the report are available. The report can also be found online at http://www.easl.eu/_eu-policy/eu-literature-review

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