Supplementary Table 1: List of ICD-19 codes included to identify patients with liver disease-related mortality

ICD-10 code	ICD-code name
C22.0	Liver cell carcinoma - Malignant neoplasms
K70.0	Alcoholic fatty liver
K70.1	Alcoholic hepatitis
K70.2	Alcoholic fibrosis and sclerosis of liver
K70.3	Alcoholic cirrhosis of liver
K70.4	Alcoholic hepatic failure
K70.9	Alcoholic liver disease, unspecified
K71.7	Toxic liver disease with fibrosis and cirrhosis of liver
K73.0	Chronic persistent hepatitis, not elsewhere specified
K73.1	Chronic lobular hepatitis, not elsewhere classified
K73.2	Chronic active hepatitis, not elsewhere classified
K73.8	Other chronic hepatitis, not elsewhere classified
K73.9	Chronic hepatitis, unspecified
K74.0	Hepatic fibrosis
K74.1	Hepatic sclerosis
K74.2	Hepatic fibrosis with hepatic sclerosis
K74.3	Primary biliary cirrhosis
K74.4	Secondary biliary cirrhosis
K74.5	Biliary cirrhosis, unspecified
K74.6	Other and unspecified cirrhosis of liver
K76.6	Portal hypertension
K76.7	Hepatorenal syndrome

Supplementary Table 2: Beta coefficients for all covariates in linear regression models evaluating factors associated with county-level age-adjusted liver disease-related mortality rates

Variable	Beta coefficient	P-value	Unadjusted R^2
County-level racial/ethnic composition			
% White Hispanic	0.25 (0.21, 0.39)	<0.001	0.08
% Black Hispanic	-1.05 (-1.99, -0.10)	0.03	0.002
% Black non-Hispanic	-0.07 (-0.11, -0.04)	<0.001	0.008
% Asian	-0.35 (-0.48, -0.22)	<0.001	0.01
% American Indian	1.07 (1.01, 1.12)	<0.001	0.40
% adults living below poverty level	0.83 (0.73, 0.93)	<0.001	0.11
% uninsured	0.76 (0.68, 0.83)	<0.001	0.17
Miles to closest liver transplant center*	0.31 (0.27, 0.36)	<0.001	0.08
Rural/urban status			0.05
Large metropolitan	Reference		
Small/medium metropolitan	3.63 (2.30, 4.98)	<0.001	
Rural	6.39 (5.17, 7.62)	<0.001	
Number of board-certified gastroenterologists	-0.04 (-0.06, -0.02)	<0.001	0.008
% with diabetes	1.77 (1.56, 2.01)	<0.001	0.09
% with obesity	0.52 (0.41, 0.63)	<0.001	0.04
% with heavy alcohol use	0.20 (-0.009, 0.40)	0.06	0.002
Listings per 100 deaths	-0.11 (-0.13, -0.10)	<0.001	0.09

* Per 10-mile increments