

Supplementary Materials and Methods

Study Data

Because data for the population under 20 years of age were unreliable due to a small number of events, we excluded this population from our final analysis. Cause of death was coded using the International Classification of Diseases–Tenth Revision in this dataset. Each observation is one death with demographic characteristics associated with the death.¹

Because the National Vital Statistic System dataset is de-identified and publicly available, our study did not require approval by the institutional review board.

Statistical Analysis

This regression fits a series of combined straight lines to trend temporal data, which determines whether

mortality rate is best explained by a single or several trend segments.² For each trend segment, the annual percentage change and the average annual percentage change, which is a summary measure of trend accounting for transitions within each trend segment, were calculated. Joinpoint regression calculates the year-to-year percentage change in annual age-standardized mortality rate and the 95% confidence interval over each trend segment.³

References

1. U.S. Census Bureau. The nation's older population is still growing, Census Bureau reports. Available at, <https://www.census.gov/newsroom/press-releases/2017/cb17-100.html>. Accessed January 10, 2017.
2. Kim HJ, Fay MP, Feuer EJ, et al. Permutation tests for joinpoint regression with applications to cancer rates. *Stat Med* 2000; 19:335–351.
3. Clegg LX, Hankey BF, Tiwari R, et al. Estimating average annual per cent change in trend analysis. *Stat Med* 2009;28:3670–3682.

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Supplementary Table 1. Age-Standardized Hepatitis C Virus Infection and Alcoholic Liver Disease–Related Mortality Rates as Underlying Cause of Death and APC Among Adults Aged ≥ 20 Years in the United States According to Ethnicity Status, 2007–2016

	Age-Standardized Rate		Average APC (95% CI)	Trend Segment 1		Trend Segment 2	
	2007	2016	2007–2016	Year	APC (95% CI)	Year	APC (95% CI)
Hepatitis C virus							
Non-Hispanic whites	2.66	1.96	-3.4 (-4.4 to -2.3)	2007–2014	-0.4 (-1.2 to 0.4)	2014–2016	-13.2 (-18.1 to -8.0)
All Hispanics	3.3	1.83	-6.1 (-8.2 to -4.1)	2007–2014	-3.8 (-5.3 to -2.3)	2014–2016	-13.8 (-23.3 to -3.2)
Mexicans	3.14	1.81	-5.3 (-8.2 to -2.3)	2007–2014	-2.6 (-4.7 to -0.4)	2014–2016	-14.2 (-27.5 to 1.4)
Puerto Ricans	7.16	3.87	-6.6 (-10.7 to -2.3)	2007–2014	-2.4 (-5.5 to 0.8)	2014–2016	-20.1 (-37.2 to 1.7)
Cubans	3.52	1.74	-8.2 (-11.8 to -4.4)				
Alcoholic liver disease							
Non-Hispanic whites	6.48	8.96	3.9 (3.1 to 4.6)	2007–2013	2.9 (2.1 to 3.7)	2013–2016	5.8 (3.4 to 8.2)
All Hispanics	6.83	7.69	1.7 (1.0 to 2.5)	2007–2013	-0.1 (-0.9 to 0.7)	2013–2016	5.4 (2.9 to 8.0)
Mexicans	7.81	8.4	1.4 (-0.4 to 3.2)	2007–2012	-0.6 (-3.4 to 2.2)	2012–2016	4.0 (-0.0 to 8.2)
Puerto Ricans	5.41	5.97	1.7 (-0.1 to 3.4)				
Cubans	3.99	5.24	1.6 (-8.7 to 13.0)	2007–2009	-23.7 (-56.8 to 34.7)	2009–2016	10.2 (2.2 to 18.9)

NOTE. Joinpoint regression analysis was not performed for HBV-related and NAFLD-related mortality due to small sample size (small number of outcomes in certain years). For each trend segment, the APC and the average APC were obtained to outline temporal changes accounting for transitions within each trend segment analyzed by joinpoint regression.

APC, annual percentage change; CI, confidence interval.

Supplementary Table 2. Age-Standardized Cirrhosis and Hepatocellular Carcinoma–Related Mortality Rates as Underlying Cause of Death and APC Among Adults Aged ≥ 20 years in the United States According to Ethnicity Status, 2007–2016

	Age-Standardized Rate		Average APC (95% CI)	Trend Segment 1		Trend Segment 2	
	2007	2016	2007–2016	Year	APC (95% CI)	Year	APC (95% CI)
Cirrhosis							
Non-Hispanic whites	11.33	14.17	2.9 (2.4 to 3.4)				
All Hispanics	10.73	11.61	1.1 (0.5 to 1.7)				
Mexicans	11.61	12.86	1.5 (0.7 to 2.3)				
Puerto Ricans	12.15	11.85	0.4 (-0.8 to 1.5)				
Cubans	10.24	11.79	0.6 (-2.4 to 3.7)				
Hepatocellular carcinoma							
Non-Hispanic whites	2.74	3.44	2.1 (1.6 to 2.6)				
All Hispanics	2.66	3.16	0.9 (-0.4, 2.2)				
Mexicans	2.63	3.31	1.8 (0.4 to 3.3)				
Puerto Ricans	4.34	5.51	1.0 (-1.2 to 3.2)				
Cubans	2.66	3.16	-0.5 (-4.9 to 4.1)				

NOTE. For each trend segment, the APC and the average APC were obtained to outline temporal changes accounting for transitions within each trend segment analyzed by joinpoint regression.

APC, annual percentage change; CI, confidence interval.