

Appendix
Role of Firearm Ownership on 2001–2016 Trends in U.S. Firearm Suicide Rates
Martínez-Alés et al.

Appendix Table 1. Change in Household Firearm Rate and Firearm Suicide Rate by State From 1999–2016

State	Household firearm ownership rate			Firearm suicide rate (per 100,000 population)		
	1999	2016	%Δ	1999	2016	%Δ
AK	0.659	0.601	−8.801	10.208	18.003	76.361
AL	0.499	0.544	9.018	11.376	12.781	12.350
AR	0.562	0.557	−0.890	9.970	12.618	26.564
AZ	0.381	0.331	−13.123	11.021	12.227	10.939
CA	0.254	0.156	−38.583	5.236	4.469	−14.645
CO	0.467	0.387	−17.131	8.430	12.553	48.919
CT	0.185	0.204	10.270	3.817	3.517	−7.877
DE	0.321	0.405	26.168	6.688	7.455	11.477
FL	0.301	0.276	−8.306	8.092	8.793	8.668
GA	0.447	0.363	−18.792	9.147	9.756	6.666
HI	0.209	0.139	−33.493	2.240	3.058	36.519
IA	0.402	0.427	6.219	6.251	8.381	34.073
ID	0.555	0.598	7.748	11.203	14.752	31.683
IL	0.276	0.224	−18.841	4.518	4.457	−1.356
IN	0.392	0.440	12.245	6.931	10.126	46.103
KS	0.451	0.452	0.222	7.132	10.045	40.847
KY	0.531	0.556	4.708	9.339	12.621	35.139
LA	0.468	0.553	18.162	10.089	10.865	7.688
MA	0.161	0.101	−37.267	2.143	2.260	5.497
MD	0.256	0.150	−41.406	5.338	4.682	−12.285
ME	0.476	0.533	11.975	7.991	9.188	14.983
MI	0.335	0.407	21.493	6.276	8.064	28.477
MN	0.431	0.428	−0.696	5.481	6.846	24.889
MO	0.412	0.558	35.437	8.671	11.926	37.536
MS	0.537	0.570	6.145	9.977	10.260	2.841
MT	0.624	0.677	8.494	11.762	17.944	52.567
NC	0.392	0.396	1.020	8.243	8.748	6.128
ND	0.585	0.564	−3.590	6.590	11.553	75.307
NE	0.435	0.438	0.690	7.550	6.951	−7.931
NH	0.400	0.502	25.500	5.968	9.935	66.479
NJ	0.134	0.091	−32.090	2.635	2.208	−16.180
NM	0.470	0.358	−23.830	11.580	13.070	12.865
NV	0.418	0.324	−22.488	15.377	12.662	−17.656
NY	0.197	0.158	−19.797	2.586	2.801	8.310
OH	0.336	0.439	30.655	6.281	8.973	42.844
OK	0.512	0.594	16.016	10.728	14.918	39.049
OR	0.491	0.391	−20.367	10.305	11.083	7.544
PA	0.372	0.426	14.516	6.567	8.526	29.826
RI	0.157	0.158	0.637	3.964	3.487	−12.027
SC	0.442	0.468	5.882	8.356	12.009	43.719
SD	0.527	0.598	13.472	8.750	11.252	28.593

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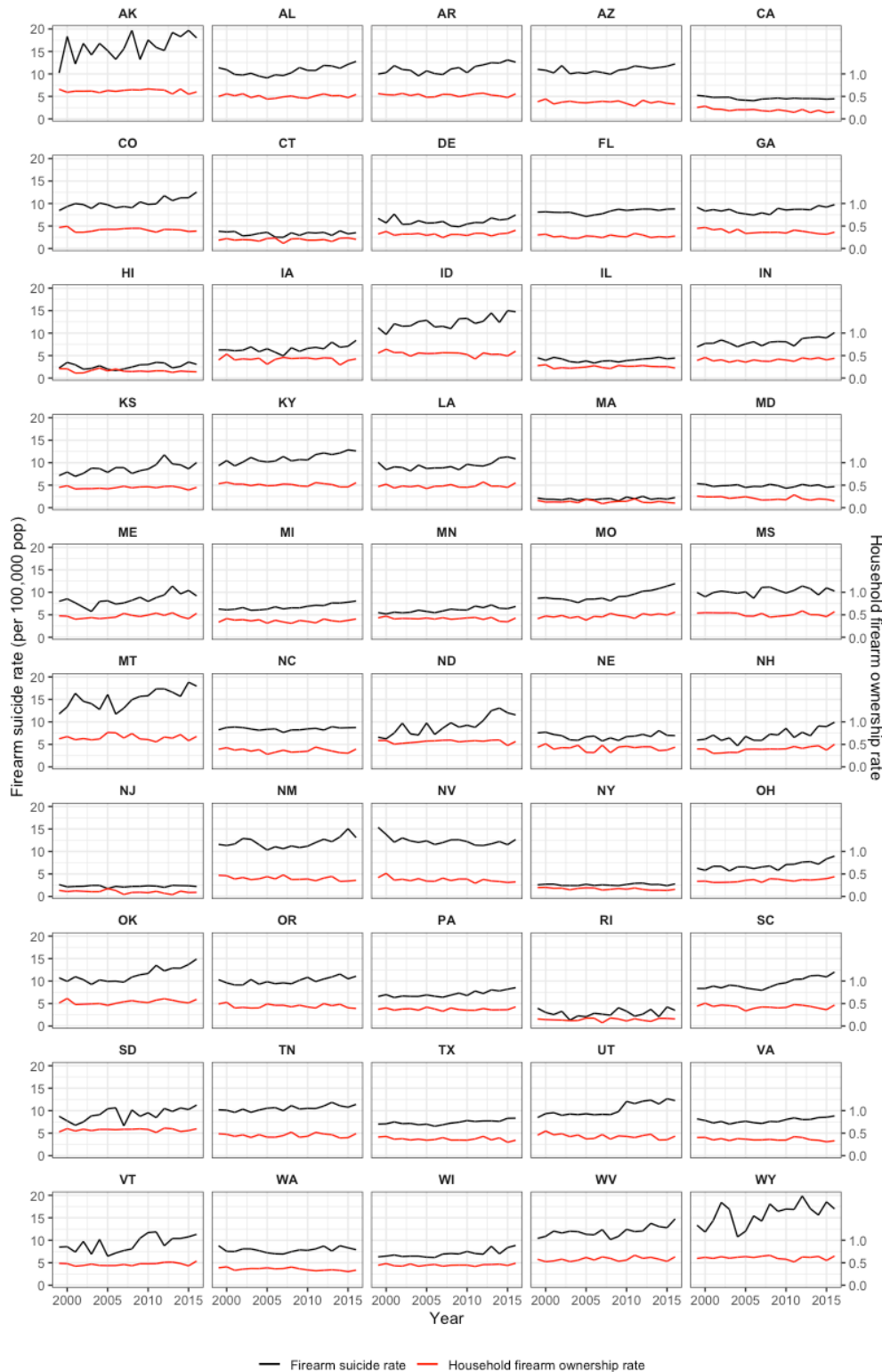
TN	0.486	0.491	1.029	10.181	11.405	12.018
TX	0.413	0.343	−16.949	7.014	8.336	18.853
UT	0.454	0.433	−4.626	8.459	12.248	44.790
VA	0.403	0.330	−18.114	8.170	8.832	8.093
VT	0.486	0.539	10.905	8.478	11.328	33.608
WA	0.386	0.335	−13.212	8.785	7.906	−10.005
WI	0.444	0.489	10.135	6.306	8.850	40.341
WV	0.578	0.632	9.343	10.410	14.747	41.664
WY	0.596	0.650	9.060	13.350	16.956	27.006

Notes: Δ denotes percent change between 1999 and 2016. Firearm suicide rates are restricted to population aged 10–84 years. Household firearm rate represents the average proportion of adults living in households with a firearm. In 1999, Nevada (15.4 per 100,000) and Massachusetts (2.1 per 100,000) had, respectively, the highest and lowest firearm suicide mortality rates. In 2016, the highest firearm suicide mortality rate corresponded with Alaska, at 18.0 per 100,000, and the lowest with New Jersey, at 2.2 per 100,000. Between 1999–2016, the largest increase and decrease in firearm suicide mortality corresponded, respectively, with Alaska (+7.8 per 100,000) and Nevada (−2.7 per 100,000). In 1999, household firearm ownership rate was highest in Alaska (0.66). In 2016, it was highest in Montana (0.68). In both years, New Jersey had the lowest household firearm ownership rate (0.13 in 1999 and 0.09 in 2016). Between 1999 and 2016, firearm ownership increased the most in Missouri (rate variation: +0.15) and decreased the most in Maryland (rate variation: −0.11).

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Appendix Figure 1.

Firearm suicide rate and household firearm ownership by state: 1999 - 2016

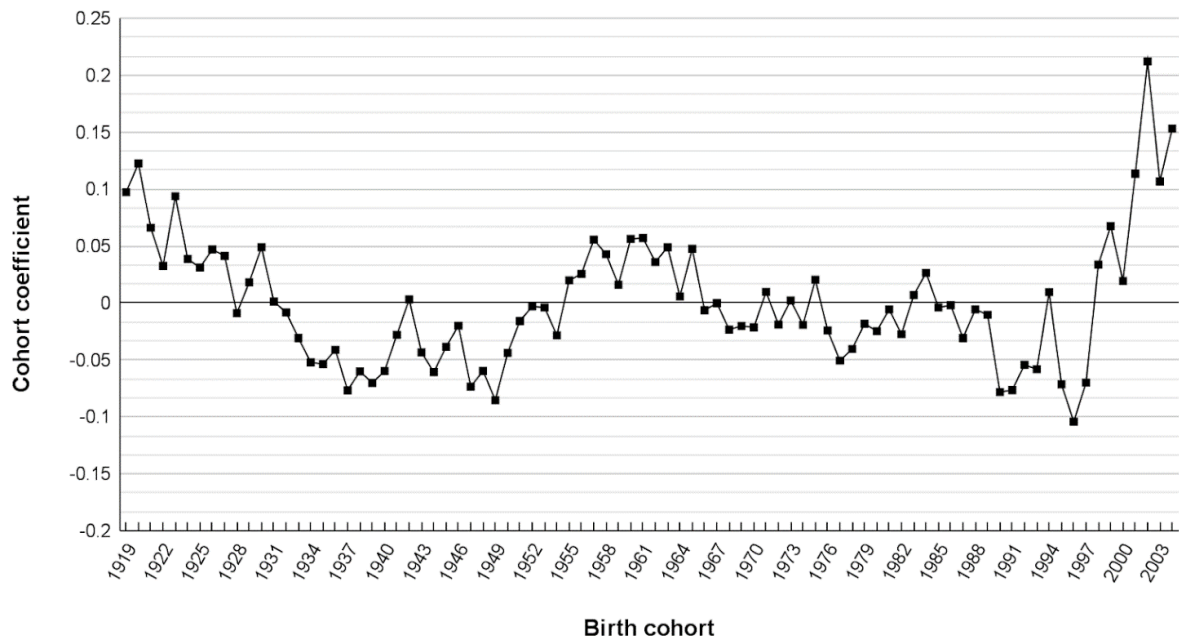


Note: Firearm suicide rates are restricted to population aged 10–84 years. Household firearm rate represents the average proportion of adults living in households with a firearm.

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Appendix Figure 2. Cohort effects on firearm suicide in the U.S. from 2001 to 2016, from hierarchical age-period-cohort models adjusted by individual-level age, sex, and race/ethnicity and state-level annual poverty rate, annual unemployment rate, annual median household income in 2014 U.S. dollars, population density, and median elevation. State-level household firearm ownership rate included as a continuous variable.

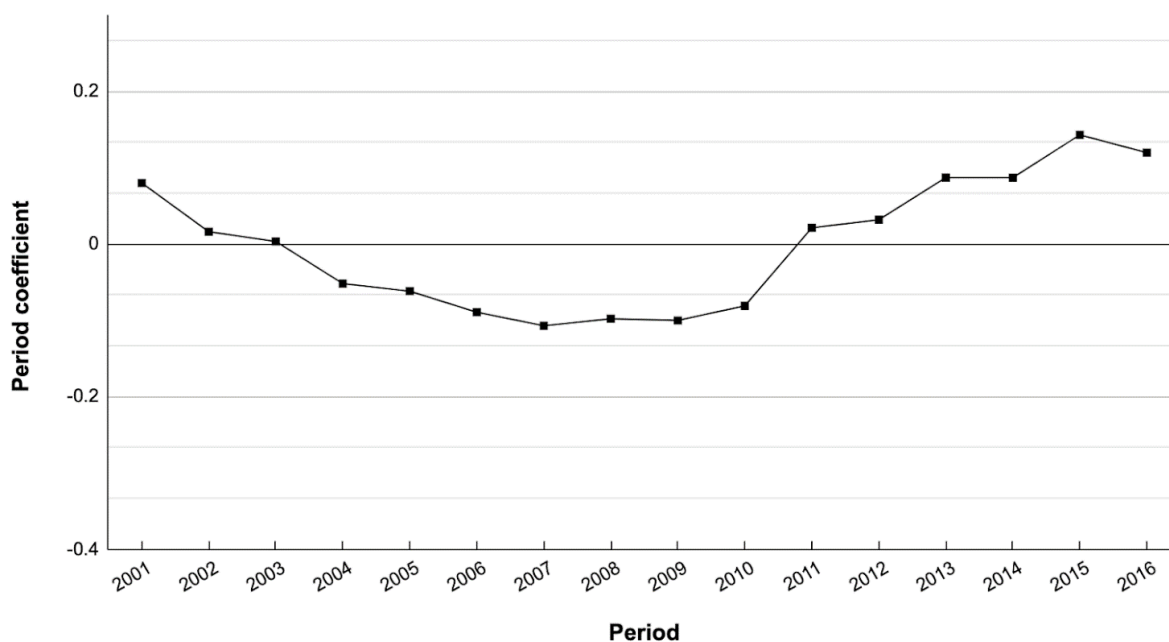
Cohort Coefficients



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Appendix Figure 3. Period effects on firearm suicide in the U.S. from 2001 to 2016, from hierarchical age-period-cohort models adjusted by individual-level age, sex, and race/ethnicity and state-level annual poverty rate, annual unemployment rate, annual median household income in 2014 U.S. dollars, population density, and median elevation. State-level household firearm ownership rate included as a continuous variable.

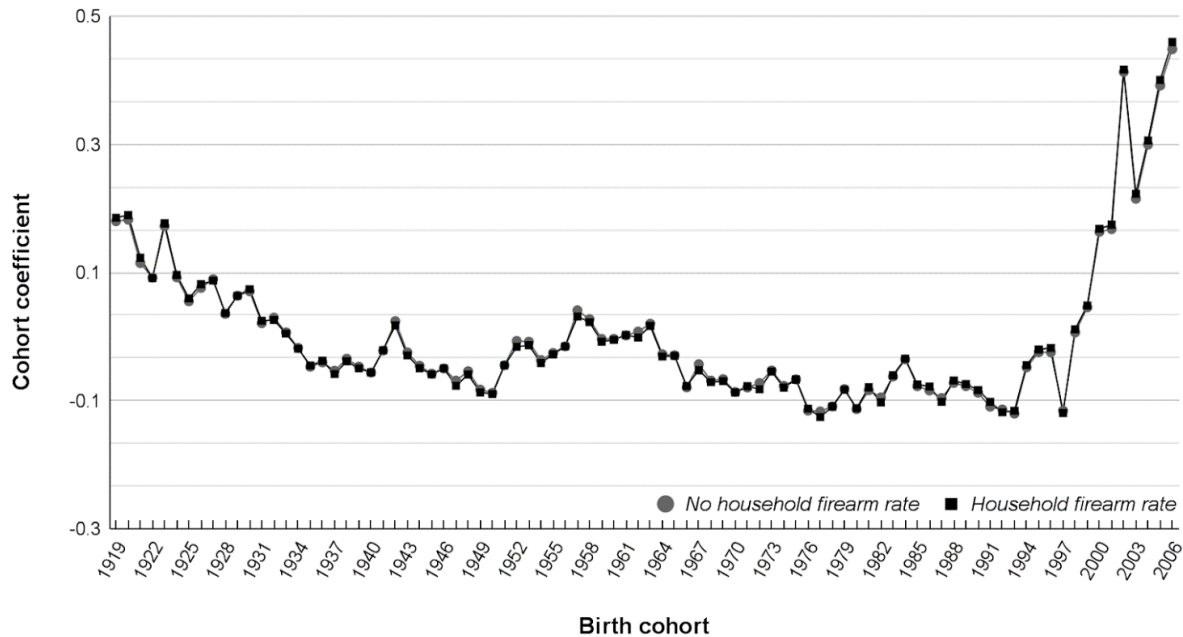
Period Coefficients



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Appendix Figure 4. Cohort effects on firearm suicide in the U.S. from 2001 to 2018, from hierarchical age-period-cohort models adjusted by individual-level age, sex, and race/ethnicity and state-level annual poverty rate, annual unemployment rate, annual median household income in 2014 U.S. dollars, population density, and median elevation.

Cohort Coefficients



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Appendix Figure 5. Period effects on firearm suicide in the U.S. from 2001 to 2018, from hierarchical age-period-cohort models adjusted by individual-level age, sex, and race/ethnicity and state-level annual poverty rate, annual unemployment rate, annual median household income in 2014 U.S. dollars, population density, and median elevation.

Period Coefficients

