

SUPPLEMENTARY MATERIAL

For

The Impact of Spikes in Handgun Acquisitions on Firearm-Related Harms

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FIGURE S1: HEAT MAP OF CITY SPIKES

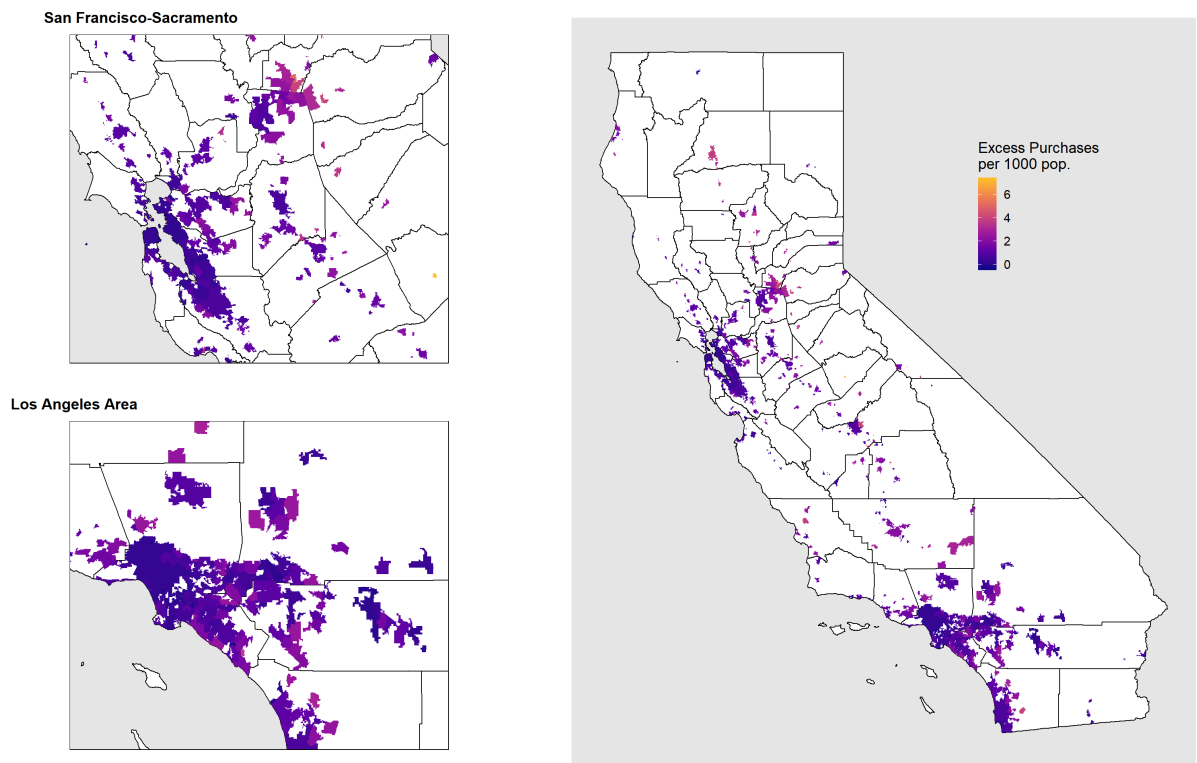
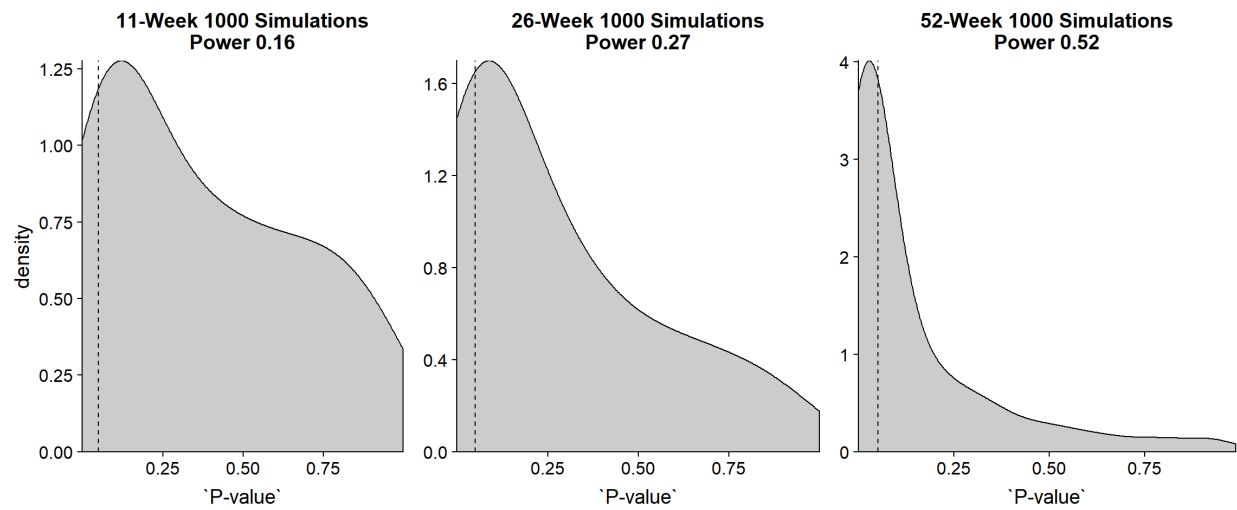
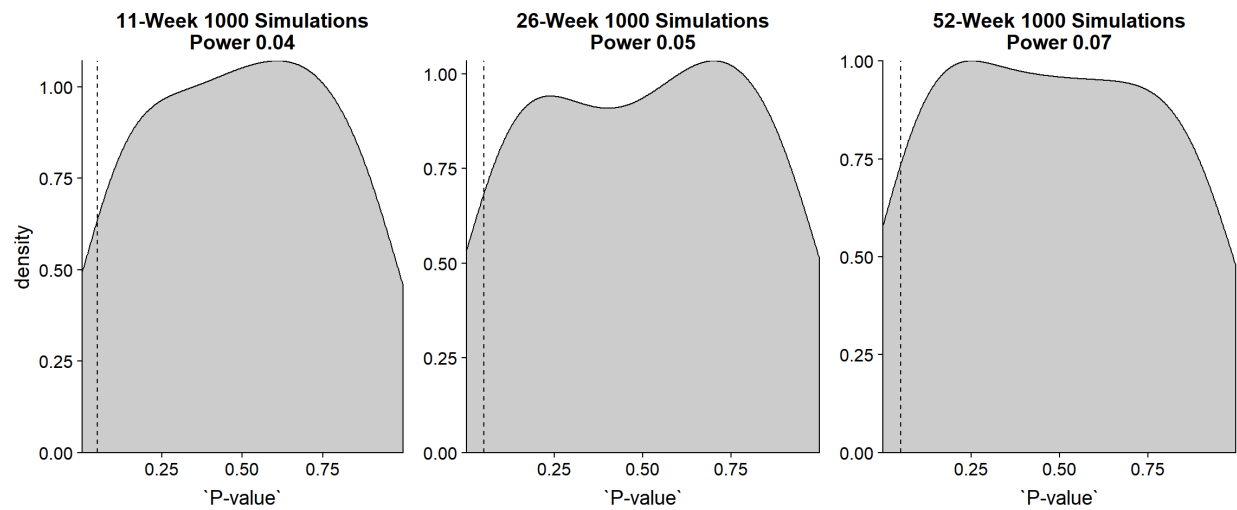


FIGURE S2: POWER CALCULATION SIMULATIONS^{1,2}

INJURY (EXCLUDING MORTALITY)



MORTALITY



¹ Power is calculated as the area under the curve from [0, 0.05]

² Densities are smoothed

TABLE S1: ALL TIME PERIODS AND ALL OUTCOMES

	11-Week Risk Ratio (95% CI)	26-Week Risk Ratio (95% CI)	52-Week Risk Ratio (95% CI)
Firearm Violence	1.018	1.029	1.033
	(0.945, 1.097)	(0.980, 1.081)	(0.997, 1.070)
Firearm Mortality	1.077	1.042	0.993
	(0.936, 1.242)	(0.953, 1.139)	(0.932, 1.058)
Interpersonal	0.967	0.977	0.937
	(0.771, 1.206)	(0.837, 1.140)	(0.837, 1.049)
Self-directed	1.137	1.033	1.001
	(0.928, 1.396)	(0.916, 1.165)	(0.921, 1.088)
Unintentional	0.333	0.794	0.765
	(0.091, 0.879)	(0.397, 1.539)	(0.442, 1.279)
Undetermined	1.884	3.619	0.656
	(0.000, Inf)	(0.690, 112.811)	(0.187, 1.781)
Firearm Injury	0.985	1.012	1.044
	(0.901, 1.076)	(0.953, 1.074)	(1.000, 1.089)
Interpersonal	1.092	1.119	1.092
	(0.920, 1.296)	(0.997, 1.256)	(1.003, 1.189)
Self-directed	0.9	0.944	1.099
	(0.454, 1.709)	(0.624, 1.414)	(0.860, 1.407)
Unintentional	1.135	0.994	1.057
	(0.799, 1.608)	(0.775, 1.270)	(0.892, 1.252)
Undetermined	0.253	0.958	1.185
	(0.032, 0.958)	(0.554, 1.651)	(0.778, 1.817)

Associations between excess handguns (per 1,000 population) acquired during the 11-week period following the 2012 presidential election and Sandy Hook and firearm violence rates (per 1,000 population)

TABLE S2: RISK RATIOS FROM SARIMA MODELS USING 1-WEEK AND 6-WEEK BINS (52-WEEK ESTIMATES)

	1-Week Bins Risk Ratio (95% CI)	6-Week Bins Risk Ratio (95% CI)
Firearm Violence	1.022 (0.991, 1.053)	1.045 (1.012, 1.079)
Firearm Mortality	0.985 (0.932, 1.042)	0.992 (0.937, 1.050)
Firearm Injury	1.032 (0.994, 1.071)	1.066 (1.024, 1.110)

Purchases are binned in shorter time periods (1-week and 6-week bins) in SARIMA models
1-week bin estimates were less stable, particularly for small cities
6-week bins included some post-spike time in the spike period

TABLE S3: RISK RATIOS CALCULATED FROM LOWER AND UPPER BOUNDS OF FIRST STAGE ESTIMATES

	52-Week Estimates	Estimates Using Lower Bound (of spike) from First Stage	Estimates Using Upper Bound (of spike) from First Stage
Firearm Violence	1.033	1.039	1.027
	(0.997, 1.070)	(0.997, 1.083)	(0.997, 1.058)
Firearm Mortality	0.993	0.996	0.992
	(0.932, 1.058)	(0.925, 1.073)	(0.940, 1.046)
Firearm Injury	1.044	1.051	1.037
	(1.000, 1.089)	(1.000, 1.104)	(1.000, 1.076)