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32

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61

62 Supplement 1. Methods, and Results

63 Methods

64 Section A. Facebook Ad Campaigns

65 We disseminated the messages using a Facebook advertising campaign that was managed by AdGlow, our marketing partner. On the
66 Facebook advertising platform, there are many ways to structure a campaign. We selected a “reach” objective, which attempts to
67 maximize the number of Facebook users seeing the ads, along with the number of times each user sees the ad, over a daily horizon or
68 the lifetime of the campaign given the campaign budget. The Thanksgiving campaign had a daily “reach” objective, while the
69 Christmas campaign had a lifetime “reach” objective. Facebook uses an algorithm to implement the campaign objective. (More
70 information is available at <https://www.facebook.com/business/help/218841515201583?id=816009278750214>.)

71

72 An important element of the algorithm is the Facebook Ads Auction. All active ad campaigns define a target audience. For both of our
73 campaigns, the target audience consisted of all Facebook users in the specified zip-codes. Every time there is an opportunity to show
74 an ad to a user, there may be many active campaigns targeting that type of individual. An auction is used to determine the cost of the
75 ad and which ad is shown to the user at that time, and the auction winner is the advertiser with the highest total value. Total value is a
76 combination of three factors: the bid of each advertiser; the estimated action rate (whether the user engages with the ad in the desired
77 way); ad quality, which is measured by Facebook and reflects feedback from previous viewers and assessments of so-called “low-

78 quality attributes.” By defining total value as more than simply the advertiser’s bid, ads that are estimated to create more user
79 engagement or that are of higher quality can beat ads with higher bids in the auction. In this way, the Facebook ad campaign algorithm
80 and Ads Auction led to the delivery of campaign materials to 11,954,108 users at Thanksgiving and 23,302,290 users at Christmas.
81 (More information about the Facebook Ads Auction is available at
82 <https://www.facebook.com/business/help/430291176997542?id=561906377587030>.)

83

84 **Section B. Outcomes**

85 **County level mobility data**

86 Our mobility outcomes come from the publicly-available Facebook Movement Range dataset, which can be downloaded at
87 <https://data.humdata.org/dataset/movement-range-maps>. The data are constructed from location information collected by Facebook
88 from users who have opted into Location History sharing and are aggregated to the county level. The publicly released data is
89 subjected to a differential privacy framework to maintain the privacy of individual Facebook users. First, regions with fewer than 300
90 users in a given data are omitted from the data set. Second, random noise is added during the construction of each metric to limit the
91 risk of being able to identify individual users.

92

93 We use both the Change in Movement metric and the Stay Put metric in our analysis. Both are calculated daily and cover the period
94 from 8pm to 7:59pm local time. Both metrics are based off of changes in locations across level-16 Bing tiles, which each represent an
95 area of approximately 600m x 600m.

96

97 Change in Movement is a measure of how many tiles the average Facebook user starting in a given county travels through during the
98 day. More specifically, the variable is constructed for each county, on each day following 5 steps: 1) the number of tiles visited is
99 calculated for each user and is top-coded at 200; 2) the total number of tiles visited by all users in that county-day observation is
100 calculated by summing over the top-coded tiles measure; 3) random noise is added to the total tiles measure following a LaPlace
101 distribution with parameters selected to satisfy Facebook's differential privacy targets; 4) the noisy total tiles variable is scaled by
102 Facebook users observed in the data to generate an average for that day in each county; 5) finally, the average movement measure is
103 scaled by an average baseline measurement for the county taken on the same day of the week between February 2-29, 2020.

104

105 Stay Put is calculated as the fraction of observed users in a given county who do not leave a single level-16 Bing tile for the whole
106 day. Specifically, in constructing the public version of this metric, 5 steps are followed: 1) a binary indicator is calculated for each
107 user based on whether they remained in a single level-16 Bing tile for the entire day; 2) the total number of users in each county

108 staying put is generated; steps 3)-5) from the Change in Movement calculation are followed. When we use the Stay Put metric in our
109 analysis, we instead create Leave Home = 1 - Stay Put so that larger values indicate more movement.

110

111 The Facebook Movement Range data are described in further detail at [https://research.fb.com/blog/2020/06/protecting-privacy-in-
112 facebook-mobility-data-during-the-covid-19-response/](https://research.fb.com/blog/2020/06/protecting-privacy-in-facebook-mobility-data-during-the-covid-19-response/).

113

114 **Zip Code-level COVID-19 data**

115 The COVID-19 data was retrieved twice a week from the following State health websites. The data is reported by hospital or labs to
116 the centralized State wide health department, which publishes the data we collected and used. Most states report positive cases based
117 on PCR tests, but some (AZ, IL, MN) combine confirmed with probable cases.

118

119 Different states have different formats to report their data: some had clean spreadsheets, others had spreadsheets that were reformatted,
120 and others had pdfs, that had to be converted into spreadsheets and cleaned. The data was retrieved manually and organized.

121

122 States reported the cumulative cases reported in each zip code. Cases are assigned to a zip code based on the address of the person
123 who tested positive.

124

125 Some zip codes were not listed on the states' websites. (we observe around 8k unique zips before dropping the censored ones, whereas
126 the total zip count for these 13 states is a bit over 10k). There are multiple reasons for this, the most popular being aggregation of
127 small zip codes into larger ones (there were other situations, like suppressing Tribal zips, or simply suppressing small zips instead of
128 aggregating them), and the data were censored for zip codes with low case counts,

129

130 We cleaned and appended all the data we collected, totaling 6998 unique zip codes with unsuppressed, non-censored data.

131 A list of the website from which the data was retrieved appears here.

132

133 AZ: <https://www.azdhs.gov/covid19/data/index.php>

134 AR: <https://achi.net/covid19/>

135 FL: <https://experience.arcgis.com/experience/96dd742462124fa0b38ddedb9b25e429>

136 IL: <https://www.dph.illinois.gov/covid19/covid19-statistics>

137 IN: <https://hub.mph.in.gov/dataset?q=COVID>

138 ME: <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/coronavirus/data.shtml>

139 MD: <https://coronavirus.maryland.gov/datasets/mdcovid19-master-zip-code-cases/data>

140 MN: <https://www.health.state.mn.us/diseases/coronavirus/stats/index.html>

141 NC: <https://covid19.ncdhhs.gov/dashboard>

142 OK: <https://looker-dashboards.ok.gov/embed/dashboards/80>

143 OR: <https://govstatus.egov.com/OR-OHA-COVID-19>

144 RI: <https://ri-department-of-health-covid-19-data-rihealth.hub.arcgis.com/>

145 VA: <https://www.vdh.virginia.gov/coronavirus/covid-19-data-insights/>

146

147 Section C. Regression Models Details

148 Inverse Hyperbolic Sine function:

149 The hyperbolic sine function is given by: $\sinh(x) = \frac{e^x - e^{-x}}{2}$, and the inverse hyperbolic sine function, is given by

150 $\operatorname{asinh}(x) = \ln(x + \sqrt{x^2 + 1})$.

151

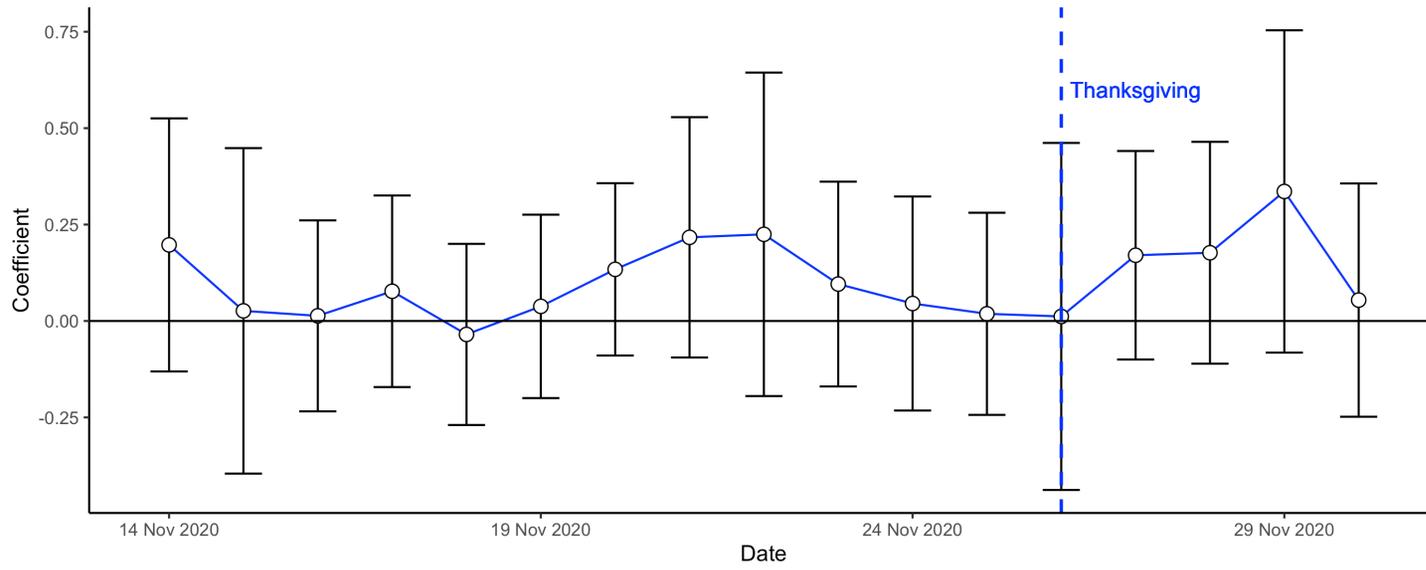
152 We chose to transform the fortnightly cases with this function, because it has the property to be equivalent to x close to 0, and to be

153 equivalent to $\ln(x)$ when $x \rightarrow +\infty$: $\operatorname{asinh}(x) \underset{x \rightarrow 0^+}{\sim} x$, $\operatorname{asinh}(x) \underset{x \rightarrow +\infty}{\sim} \ln(x)$. It behaves like a logarithm for most our our

154 observations, except that there is no singularity at 0.

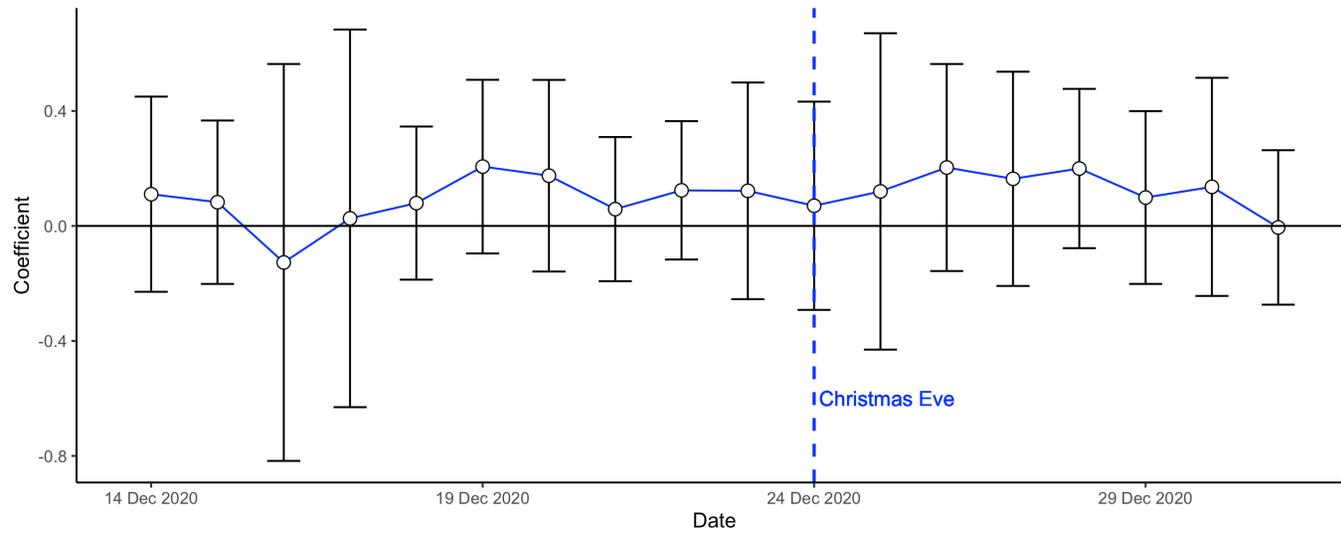
161 **Figure S2. Day by day difference between high and low intensity counties on Share Ever Left Home***

162 PANEL A: Thanksgiving Campaign



163

164 PANEL B: Christmas Campaign



165

166 *These Figures show a day by day estimation of the regression equation (1). The outcome is Share Ever Left Home.

167 **Table S2a. Analyses of Mobility Outcomes by Baseline Covid-19 Cases***

Campaign	Outcome	Period	OLS model						Number of days*counties
			High county * High baseline	p-value	High county	p-value	High baseline	p-value	
Both campaigns	Distance Traveled	from d-3 to d-1	0.811 (-0.579,2.202)	0.253	-1.484 (-2.736,-0.231)	0.020	-0.518 (-1.727,0.690)	0.401	4059
	Share Ever Left Home	Thanksgiving (Nov 26)/ Christmas (Dec 24-25)	-0.471 (-1.309,0.368)	0.271	0.325 (-0.380,1.029)	0.367	0.695 (0.128,1.263)	0.016	2017
Thanksgiving	Distance Traveled	from d-3 to d-1	1.509 (-0.369,3.387)	0.115	-1.813 (-3.479,-0.146)	0.033	-0.744 (-2.210,0.722)	0.320	2072
	Share Ever Left Home	Thanksgiving (Nov 26)	0.082 (-0.889,1.053)	0.869	-0.052 (-0.889,0.784)	0.903	0.404 (-0.255,1.064)	0.230	689
Christmas	Distance Traveled	from d-3 to d-1	0.738 (-1.110,2.586)	0.434	-1.518 (-3.179,0.142)	0.073	-0.853 (-2.297,0.590)	0.247	1987
	Share Ever Left Home	Christmas (Dec 24-25)	-0.123 (-0.993,0.746)	0.781	0.181 (-0.580,0.943)	0.640	0.300 (-0.323,0.922)	0.345	1328

168 *This Table gives the control and treatment means at the county level and different periods, in addition to estimates of equation (1)

169 coefficients (here, an interaction with High Baseline is added to the equation) . Standard errors are clustered at the county level. 95%

170 CI are reported in parentheses. High Baseline is defined as: Cumulative Covid-19 county cases per capita at baseline above median.

171 **Table S2b. Analyses of Covid-19 Outcome by Baseline Covid-19 Cases ***

Campaign	Outcome	Period	County treatment	OLS model						Number of zip codes
				Treated x High baseline	p-value	Treated	p-value	High baseline	p-value	
Both campaigns	Asinh(Fortnightly Cases)	dec/jan 01-14	All	0.047 (-0.003,0.096)	0.065	-0.058 (-0.102,-0.014)	0.009	0.311 (0.259,0.363)	0.000	13489
			Low Intensity	0.059 (-0.015,0.133)	0.119	-0.061 (-0.122,0.001)	0.054	0.165 (0.105,0.225)	0.000	6723
			High Intensity	0.047 (-0.027,0.121)	0.214	-0.064 (-0.127,-0.001)	0.048	0.240 (0.159,0.321)	0.000	6766
Thanksgiving	Asinh(Fortnightly Cases)	dec 01-14	All	0.039 (-0.022,0.101)	0.208	-0.047 (-0.100,0.006)	0.082	0.095 (0.031,0.159)	0.004	6773
			Low Intensity	0.035 (-0.065,0.135)	0.496	-0.033 (-0.115,0.049)	0.434	0.075 (-0.010,0.159)	0.082	3294
			High Intensity	0.048 (-0.042,0.139)	0.292	-0.064 (-0.141,0.013)	0.105	0.107 (0.006,0.209)	0.038	3479
Christmas	Asinh(Fortnightly Cases)	jan 01-14	All	0.060 (0.004,0.115)	0.035	-0.073 (-0.123,-0.022)	0.005	0.011 (-0.046,0.067)	0.714	6716
			Low Intensity	0.082 (-0.006,0.169)	0.067	-0.091 (-0.166,-0.015)	0.018	-0.049 (-0.119,0.022)	0.178	3429
			High Intensity	0.020 (-0.069,0.110)	0.654	-0.047 (-0.126,0.032)	0.241	0.095 (-0.003,0.194)	0.058	3287

172 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation
 173 (2). An interaction with High Covid-19 Baseline was added to the equation. The outcome is the log of the Fortnightly Cases, during a
 174 period which starts 5 to 7 days after the event (Thanksgiving or Christmas). 95% CI are reported in parentheses. High Baseline is
 175 defined as: Cumulative Covid-19 zip cases at baseline above median.

176 **Table S3a. Analyses of Mobility Outcomes by Party Majority***

Campaign	Outcome	Period	OLS model						Number of days*counties
			High county x Majority Rep	p-value	High county	p-value	Majority Rep	p-value	
Both campaigns	Distance Traveled	from d-3 to d-1	-0.949 (-2.172,0.274)	0.128	-0.240 (-1.211,0.731)	0.628	0.881 (-0.267,2.030)	0.133	4059
	Share Ever Left Home	Thanksgiving (Nov 26)/ Christmas (Dec 24-25)	0.024 (-0.939,0.988)	0.960	0.011 (-0.848,0.869)	0.981	0.009 (-0.606,0.624)	0.977	2017
Thanksgiving	Distance Traveled	from d-3 to d-1	-0.632 (-2.545,1.282)	0.518	-0.422 (-2.067,1.223)	0.615	0.448 (-1.087,1.983)	0.567	2072
	Share Ever Left Home	Thanksgiving (Nov 26)	0.085 (-1.096,1.265)	0.888	-0.056 (-1.125,1.013)	0.918	-0.143 (-0.920,0.635)	0.719	689
Christmas	Distance Traveled	from d-3 to d-1	-1.472 (-3.208,0.264)	0.097	0.122 (-1.340,1.585)	0.870	1.475 (0.240,2.711)	0.019	1987
	Share Ever Left Home	Christmas (Dec 24-25)	-0.245 (-1.156,0.666)	0.598	0.287 (-0.513,1.087)	0.482	0.280 (-0.352,0.911)	0.385	1328

177 *This Table gives the control and treatment means at the county level and different periods, in addition to estimates of equation (1)

178 coefficients (here, an interaction with Republican Majority is added to the equation) . Standard errors are clustered at the county level.

179 95% CI are reported in parentheses. Republican Majority is defined by “share of republican voters > share of democrat voters” in the

180 county.

181 **Table S3b. Analyses of Covid Outcome by Party Majority***

Campaign	Outcome	Period	County treatment	OLS model				Number of zip codes
				Treated x Majority Rep	p-value	Treated	p-value	
Both campaigns	Asinh(Fortnightly Cases)	dec/jan 01-14	All	-0.001 (-0.052,0.050)	0.975	-0.034 (-0.073,0.005)	0.087	13489
			Low Intensity	-0.044 (-0.112,0.024)	0.209	-0.003 (-0.051,0.045)	0.901	6723
			High Intensity	0.001 (-0.071,0.073)	0.979	-0.040 (-0.095,0.015)	0.156	6766
Thanksgiving	Asinh(Fortnightly Cases)	dec 01-14	All	-0.046 (-0.111,0.019)	0.164	0.004 (-0.047,0.054)	0.886	6773
			Low Intensity	-0.046 (-0.144,0.053)	0.360	0.016 (-0.062,0.094)	0.692	3294
			High Intensity	-0.047 (-0.132,0.039)	0.286	-0.008 (-0.073,0.057)	0.817	3479
Christmas	Asinh(Fortnightly Cases)	jan 01-14	All	-0.017 (-0.077,0.043)	0.572	-0.031 (-0.076,0.014)	0.175	6716
			Low Intensity	-0.063 (-0.143,0.017)	0.123	-0.008 (-0.063,0.047)	0.780	3429
			High Intensity	0.032 (-0.059,0.123)	0.491	-0.057 (-0.130,0.015)	0.122	3287

182 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation
 183 (2). An interaction with Republican Majority was added to the equation. The outcome is the Inverse Hyperbolic Sine of the
 184 Fortnightly Cases, during a period which starts 5 to 7 days after the event (Thanksgiving or Christmas). 95% CI are reported in
 185 parentheses. Republican Majority is defined by “share of republican voters > share of democrat voters” in the county.

186 **Table S3c. Analyses of Mobility Outcomes: Urban vs Rural***

Campaign	Outcome	Period	OLS model						Number of days*counties
			High county x Majority urban	p-value	High county	p-value	Majority urban	p-value	
Both campaigns	Distance Traveled	from d-3 to d-1	0.089 (-1.130,1.309)	0.886	-1.025 (-1.920,-0.130)	0.025	-0.497 (-1.512,0.517)	0.337	4056
	Share Ever Left Home	Thanksgiving (Nov 26)/ Christmas (Dec 24-25)	-0.385 (-1.157,0.386)	0.327	0.203 (-0.343,0.750)	0.466	-0.089 (-0.599,0.421)	0.733	2015
Thanksgiving	Distance Traveled	from d-3 to d-1	0.270 (-1.380,1.919)	0.749	-1.027 (-2.302,0.249)	0.115	-0.502 (-1.769,0.765)	0.438	2072
	Share Ever Left Home	Thanksgiving (Nov 26)	-0.521 (-1.401,0.359)	0.246	0.233 (-0.404,0.870)	0.474	0.197 (-0.414,0.808)	0.527	689
Christmas	Distance Traveled	from d-3 to d-1	0.074 (-1.473,1.621)	0.925	-1.077 (-2.310,0.156)	0.087	-0.701 (-1.852,0.451)	0.233	1984
	Share Ever Left Home	Christmas (Dec 24-25)	-0.205 (-0.947,0.538)	0.589	0.184 (-0.385,0.753)	0.526	-0.442 (-0.972,0.087)	0.102	1326

187 *This Table gives the control and treatment means at the county level and different periods, in addition to estimates of equation (1)

188 coefficients (here, an interaction with Urban Majority is added to the equation) . Standard errors are clustered at the county level. 95%

189 CI are reported in parentheses. Urban Majority is defined by a majority of urban zip codes in the county.

190 **Table S3d. Analyses of Covid Outcome: Urban vs Rural ***

Campaign	Outcome	Period	County treatment	OLS model				Number of zip codes
				Treated x Majority urban	p-value	Treated	p-value	
Both campaigns	Asinh(Fortnightly Cases)	dec/jan 01-14	All	0.037 (-0.016,0.090)	0.176	-0.054 (-0.100,-0.008)	0.021	13489
			Low Intensity	0.059 (-0.014,0.132)	0.114	-0.063 (-0.127,0.001)	0.053	6723
			High Intensity	0.020 (-0.053,0.092)	0.597	-0.049 (-0.110,0.012)	0.115	6766
Thanksgiving	Asinh(Fortnightly Cases)	dec 01-14	All	0.046 (-0.019,0.111)	0.163	-0.051 (-0.104,0.003)	0.062	6773
			Low Intensity	0.051 (-0.044,0.146)	0.294	-0.041 (-0.117,0.036)	0.300	3294
			High Intensity	0.043 (-0.045,0.130)	0.339	-0.061 (-0.135,0.013)	0.105	3479
Christmas	Asinh (Fortnightly Cases)	jan 01-14	All	0.030 (-0.034,0.093)	0.358	-0.058 (-0.113,-0.004)	0.037	6716
			Low Intensity	0.054 (-0.037,0.145)	0.246	-0.079 (-0.160,0.003)	0.059	3429
			High Intensity	0.006 (-0.083,0.094)	0.900	-0.039 (-0.112,0.034)	0.297	3287

191 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation
 192 (2). An interaction with Urban Majority was added to the equation. The outcome is the Inverse Hyperbolic Sine of the Fortnightly
 193 Cases, during a period which starts 5 to 7 days after the event (Thanksgiving or Christmas). 95% CI are reported in parentheses. Urban
 194 Majority is defined by a majority of urban zip codes in the county.

195 **Table S3e Analyses of Mobility Outcomes by Republican Majority x Urban Majority***

Campaign	Outcome	Period	OLS model								Number of days*counties
			High x Majority urban x Majority rep	p-value	High x Majority rep	p-value	High x Majority urban	p-value	High county	p-value	
Both campaigns	Distance Traveled	from d-3 to d-1	0.378 (-2.464,3.219)	0.794	-1.199 (-3.598,1.200)	0.327	-0.446 (-2.864,1.971)	0.718	0.036 (-2.158,2.231)	0.974	4056
	Share Ever Left Home	Thanksgiving (Nov 26)/ Christmas (Dec 24-25)	-0.932 (-3.192,1.328)	0.419	0.490 (-1.455,2.435)	0.621	0.341 (-1.741,2.424)	0.748	-0.231 (-2.092,1.630)	0.808	
Thanksgiving	Distance Traveled	from d-3 to d-1	-0.848 (-5.709,4.014)	0.733	-0.069 (-4.485,4.347)	0.976	0.814 (-3.650,5.277)	0.721	-0.964 (-5.184,3.255)	0.654	2072
	Share Ever Left Home	Thanksgiving (Nov 26)	-0.382 (-3.251,2.486)	0.794	0.153 (-2.409,2.715)	0.907	-0.242 (-2.937,2.453)	0.860	0.097 (-2.377,2.572)	0.938	689
Christmas	Distance Traveled	from d-3 to d-1	0.999 (-3.534,5.533)	0.666	-2.110 (-6.294,2.074)	0.323	-1.111 (-5.264,3.042)	0.600	0.793 (-3.188,4.773)	0.696	1984
	Share Ever Left Home	Christmas (Dec 24-25)	-1.962 (-4.245,0.321)	0.092	0.957 (-1.106,3.021)	0.363	1.305 (-0.815,3.426)	0.227	-0.667 (-2.646,1.311)	0.508	1326

196 *This Table gives the control and treatment means at the county level and different periods, in addition to estimates of equation (1)
 197 coefficients (here, an interaction with Urban Majority and Republican Majority is added to the equation) . Standard errors are
 198 clustered at the county level. 95% CI are reported in parentheses. Urban Majority is defined by a majority of urban zip codes in the
 199 county. Republican Majority is defined by “share of republican voters > share of democrat voters” in the county.

200 **Table S3f. Analyses of Covid Outcome by Republican Majority x Urban Majority***

Campaign	Outcome	Period	County treatment	OLS model								Number of zip codes
				Treated x Majority urban x Majority rep	p-value	Treated x Majority rep	p-value	Treated x Majority urban	p-value	Treated	p-value	
Both campaigns	Asinh(Fortnightly Cases)	dec/jan 01-14	All	-0.129 (-0.278,0.021)	0.092	0.113 (-0.026,0.251)	0.112	0.143 (0.008,0.278)	0.038	-0.153 (-0.283,-0.023)	0.021	13489
			Low Intensity	-0.003 (-0.215,0.208)	0.975	-0.017 (-0.216,0.182)	0.869	0.053 (-0.139,0.246)	0.587	-0.048 (-0.235,0.139)	0.614	6723
			High Intensity	-0.135 (-0.348,0.078)	0.215	0.109 (-0.089,0.308)	0.279	0.128 (-0.067,0.323)	0.198	-0.146 (-0.333,0.042)	0.128	6766
Thanksgiving	Asinh(Fortnightly Cases)	dec 01-14	All	0.110 (-0.080,0.301)	0.255	-0.110 (-0.286,0.066)	0.220	-0.052 (-0.226,0.122)	0.561	0.047 (-0.120,0.213)	0.583	6773
			Low Intensity	0.118 (-0.154,0.389)	0.396	-0.109 (-0.356,0.138)	0.386	-0.048 (-0.295,0.198)	0.700	0.055 (-0.178,0.288)	0.644	3294
			High Intensity	0.103 (-0.164,0.369)	0.451	-0.109 (-0.358,0.140)	0.390	-0.052 (-0.297,0.193)	0.677	0.037 (-0.200,0.274)	0.761	3479
Christmas	Asinh(Fortnightly Cases)	jan 01-14	All	-0.220 (-0.411,-0.030)	0.023	0.157 (-0.022,0.337)	0.086	0.197 (0.021,0.372)	0.028	-0.197 (-0.367,-0.027)	0.023	6716
			Low Intensity	-0.084 (-0.401,0.232)	0.602	0.018 (-0.287,0.324)	0.906	0.099 (-0.198,0.397)	0.513	-0.095 (-0.389,0.198)	0.525	3429
			High Intensity	-0.322 (-0.562,-0.082)	0.009	0.263 (0.044,0.482)	0.019	0.260 (0.042,0.478)	0.019	-0.265 (-0.470,-0.061)	0.011	3287

201 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation
 202 (2). An interaction with Urban Majority and Republican Majority was added to the equation. The outcome is the log of the Fortnightly
 203 Cases, during a period which starts 5 to 7 days after the event (Thanksgiving or Christmas). 95% CI are reported in parentheses. Urban
 204 Majority is defined by a majority of urban zip codes in the county. Republican Majority is defined by “share of republican voters >
 205 share of democrat voters” in the county.

206 **Table S4. Effect of Intervention on Movement Outcomes, with Double Post Lasso Control Variables***

Campaign	Outcome	Period	Mean (95% CI)		OLS model		Number of days * counties
			High county	Low county	High county coef (95% CI)	p-value	
Both campaigns	Distance Traveled	from d-3 to d-1	-4.384 (-4.973,-3.796)	-3.603 (-4.254,-2.952)	-0.950 (-1.558,-0.342)	0.002	4059
	Share Ever Left Home	Thanksgiving (Nov 26)/ Christmas (Dec 24-25)	72.326 (72.012,72.639)	72.381 (72.092,72.670)	-0.008 (-0.380,0.364)	0.968	2017
Thanksgiving	Distance Traveled	from d-3 to d-1	-6.082 (-6.822,-5.341)	-5.320 (-6.113,-4.527)	-0.731 (-1.528,0.067)	0.073	2072
	Share Ever Left Home	Thanksgiving (Nov 26)	71.308 (70.885,71.731)	71.468 (71.071,71.866)	0.074 (-0.258,0.406)	0.662	689
Christmas	Distance Traveled	from d-3 to d-1	-2.603 (-3.279,-1.927)	-1.823 (-2.588,-1.057)	-1.004 (-1.764,-0.244)	0.010	1987
	Share Ever Left Home	Christmas (Dec 24-25)	72.859 (72.507,73.210)	72.852 (72.520,73.185)	0.074 (-0.235,0.384)	0.638	1328

207 *This Table gives the control and treatment means at the county level and different periods, in addition to the estimate of the treatment
 208 coefficient in equation (1). Controls (county covariates and state fixed effects) are selected via Double Post Lasso. Standard errors are
 209 clustered at the county level. 95% CI are reported in parentheses.

210 **Table S5a. Effect of Intervention on Mobility: quantile regression***

Campaign	Outcome	Period	Quantile										Number of days * counties
			0.10		0.25		0.5		0.75		0.9		
			High county (CI 95%)	p-value									
Both campaigns	Distance Traveled	from d-3 to d-1	-1.206 (-2.064,-0.347)	0.006	-0.666 (-1.205,-0.128)	0.015	-0.575 (-1.021,-0.130)	0.011	-0.905 (-1.350,-0.461)	0.000	-1.563 (-2.529,-0.598)	0.002	4059
	Share Ever Left Home	Thanksgiving (Nov 26) or Christmas (Dec 24-25)	-0.137 (-0.841,0.566)	0.702	-0.090 (-0.643,0.462)	0.749	-0.172 (-0.752,0.407)	0.560	0.190 (-0.190,0.571)	0.326	0.291 (-0.088,0.670)	0.133	
Thanksgiving	Distance Traveled	from d-3 to d-1	-1.223 (-2.202,-0.244)	0.014	-0.836 (-1.366,-0.306)	0.002	-0.441 (-1.100,0.218)	0.190	-0.819 (-1.622,-0.016)	0.046	-1.092 (-2.527,0.342)	0.136	2072
	Share Ever Left Home	Thanksgiving (Nov 26)	0.304 (-0.862,1.470)	0.609	-0.201 (-0.947,0.544)	0.597	0.103 (-0.482,0.688)	0.731	-0.178 (-0.770,0.415)	0.557	0.235 (-0.466,0.936)	0.512	
Christmas	Distance Traveled	from d-3 to d-1	-0.970 (-1.985,0.044)	0.061	-0.345 (-0.910,0.221)	0.233	-0.722 (-1.307,-0.137)	0.016	-1.441 (-2.216,-0.666)	0.000	-1.215 (-2.589,0.160)	0.083	1987
	Share Ever Left Home	Christmas (Dec 24-25)	-0.158 (-0.978,0.662)	0.706	0.170 (-0.325,0.664)	0.501	0.027 (-0.348,0.402)	0.886	0.299 (-0.029,0.626)	0.074	0.319 (-0.083,0.720)	0.120	

211 * This Table gives the quantile treatment effects on mobility at the county level. The coefficients were estimated with the Barrodale

212 and Roberts algorithm (quantreg R package). Standard errors were obtained with the bootstrap method. 95% CI are reported in

213 parentheses.

214 **Table S5b. Effect of Intervention on Covid-19 Outcome (Asinh(Fortnightly Cases)): quantile regression***

Campaign	Outcome	Period	County treatment	Quantile										Number of zip codes
				0.10		0.25		0.5		0.75		0.9		
				Treated (CI 95%)	p-value									
Both campaigns	Asinh(Fortnightly Cases)	dec/jan 01-14	All	-0.066 (-0.129,-0.003)	0.041	-0.048 (-0.081,-0.015)	0.005	-0.024 (-0.047,-0.001)	0.037	-0.023 (-0.051,0.006)	0.119	-0.010 (-0.048,0.027)	0.587	13489
			Low Intensity	-0.110 (-0.194,-0.027)	0.010	-0.032 (-0.073,0.009)	0.129	-0.010 (-0.037,0.017)	0.467	-0.003 (-0.036,0.030)	0.864	-0.025 (-0.071,0.021)	0.281	6723
			High Intensity	-0.054 (-0.135,0.027)	0.192	-0.039 (-0.078,0.001)	0.057	-0.027 (-0.053,-0.001)	0.041	-0.038 (-0.076,-0.001)	0.047	-0.038 (-0.102,0.026)	0.249	6766
Thanksgiving	Asinh(Fortnightly Cases)	dec 01-14	All	-0.080 (-0.138,-0.022)	0.007	-0.032 (-0.065,0.001)	0.058	-0.016 (-0.040,0.008)	0.197	-0.011 (-0.037,0.015)	0.404	-0.036 (-0.094,0.023)	0.237	6773
			Low Intensity	-0.101 (-0.182,-0.021)	0.013	-0.029 (-0.090,0.031)	0.337	-0.003 (-0.035,0.029)	0.854	-0.004 (-0.039,0.031)	0.813	-0.007 (-0.070,0.057)	0.839	3294
			High Intensity	-0.052 (-0.138,0.034)	0.239	-0.033 (-0.084,0.017)	0.190	-0.035 (-0.071,0.001)	0.054	-0.016 (-0.054,0.021)	0.392	-0.062 (-0.151,0.026)	0.169	3479
Christmas	Asinh(Fortnightly Cases)	jan 01-14	All	-0.065 (-0.127,-0.003)	0.040	-0.023 (-0.057,0.011)	0.189	-0.016 (-0.040,0.008)	0.197	-0.028 (-0.049,-0.007)	0.008	-0.057 (-0.111,-0.003)	0.040	6716
			Low Intensity	-0.099 (-0.218,0.020)	0.104	-0.034 (-0.073,0.005)	0.084	-0.003 (-0.035,0.029)	0.854	-0.010 (-0.037,0.017)	0.462	-0.030 (-0.104,0.044)	0.426	3429
			High Intensity	-0.029 (-0.142,0.083)	0.609	-0.019 (-0.076,0.039)	0.528	-0.035 (-0.071,0.001)	0.054	-0.038 (-0.075,-0.001)	0.042	-0.081 (-0.159,-0.004)	0.039	3287

215 *This Table gives the quantile treatment effects on Covid-19 cases at the zip level. The outcome is Asinh(Fortnightly Cases), during a
 216 period which starts 5 to 7 days after the event (Thanksgiving or Christmas). 95% CI are reported in parentheses. The coefficients were
 217 estimated with the Barrodale and Roberts algorithm (quantreg R package). Standard errors were obtained with the bootstrap method.
 218 95% CI are reported in parentheses.

219 **Table S5c. Effect of Intervention on Covid-19 Outcome (Log(Fortnightly Cases +1)): quantile regression***

Campaign	Outcome	Period	County treatment	Quantile										Number of zip codes
				0.10		0.25		0.5		0.75		0.9		
				Treated (CI 95%)	p-value	Treated (CI 95%)	p-value	Treated (CI 95%)	p-value	Treated (CI 95%)	p-value	Treated (CI 95%)	p-value	
Both campaigns	Log(Fortnightly Cases+1)	dec/jan 01-14	All	-0.058 (-0.105,-0.010)	0.017	-0.044 (-0.081,-0.007)	0.019	-0.020 (-0.043,0.004)	0.099	-0.024 (-0.051,0.003)	0.087	0.000 (-0.045,0.045)	0.993	13489
			Low Intensity	-0.091 (-0.167,-0.016)	0.017	-0.032 (-0.069,0.004)	0.084	-0.002 (-0.029,0.025)	0.867	-0.005 (-0.040,0.031)	0.802	-0.024 (-0.065,0.016)	0.242	6723
			High Intensity	-0.051 (-0.138,0.036)	0.249	-0.039 (-0.087,0.009)	0.110	-0.025 (-0.051,0.001)	0.056	-0.032 (-0.070,0.007)	0.111	-0.042 (-0.109,0.026)	0.227	6766
Thanksgiving	Log(Fortnightly Cases+1)	dec 01-14	All	-0.060 (-0.110,-0.009)	0.022	-0.021 (-0.062,0.020)	0.315	-0.004 (-0.026,0.018)	0.703	-0.018 (-0.048,0.013)	0.258	-0.032 (-0.078,0.013)	0.166	6773
			Low Intensity	-0.068 (-0.146,0.009)	0.085	-0.025 (-0.091,0.041)	0.461	0.010 (-0.028,0.047)	0.609	-0.006 (-0.049,0.038)	0.802	0.001 (-0.054,0.056)	0.968	3294
			High Intensity	-0.047 (-0.110,0.015)	0.138	-0.025 (-0.072,0.023)	0.306	-0.015 (-0.045,0.015)	0.334	-0.026 (-0.065,0.012)	0.185	-0.062 (-0.121,-0.003)	0.040	3479
Christmas	Log(Fortnightly Cases+1)	jan 01-14	All	-0.057 (-0.117,0.004)	0.066	-0.024 (-0.058,0.011)	0.174	-0.021 (-0.042,0.000)	0.051	-0.027 (-0.048,-0.005)	0.014	-0.036 (-0.086,0.015)	0.168	6716
			Low Intensity	-0.087 (-0.201,0.028)	0.138	-0.033 (-0.072,0.006)	0.100	-0.006 (-0.040,0.028)	0.721	-0.017 (-0.042,0.009)	0.207	-0.022 (-0.086,0.041)	0.491	3429
			High Intensity	-0.044 (-0.129,0.040)	0.303	-0.010 (-0.070,0.051)	0.751	-0.033 (-0.066,0.000)	0.051	-0.045 (-0.082,-0.007)	0.021	-0.058 (-0.131,0.015)	0.118	3287

220 *This Table gives the quantile treatment effects on Covid-19 cases at the zip level. The outcome is log(Fortnightly Cases +1), during a
 221 period which starts 5 to 7 days after the event (Thanksgiving or Christmas). 95% CI are reported in parentheses. The coefficients were
 222 estimated with the Barrodale and Roberts algorithm (quantreg R package). Standard errors were obtained with the bootstrap method.
 223 95% CI are reported in parentheses.

224 **Table S6a. Effect of Intervention on Covid-19 Outcome (both campaigns), robustness to function form**

Specification	Outcome	Period	County treatment	Mean (CI 95%)		OLS model		Number of zip codes
				Treatment	Control	Treatment (CI 95%)	p-value	
Fortnightly cases zeros are omitted	Log(Fortnightly Cases)	dec/jan 01-14	All	3.718 (3.672,3.764)	3.745 (3.700,3.790)	-0.033 (-0.060,-0.007)	0.013	13269
			Low Intensity	3.733 (3.649,3.816)	3.738 (3.687,3.788)	-0.036 (-0.070,-0.001)	0.042	6603
			High Intensity	3.713 (3.663,3.764)	3.767 (3.688,3.847)	-0.034 (-0.069,0.000)	0.051	6666
Fortnightly cases zeros are replaced with min(positive Fortnightly cases)/2	Log(Fortnightly Cases)	dec/jan 01-14	All	3.649 (3.601,3.697)	3.670 (3.623,3.717)	-0.036 (-0.064,-0.008)	0.011	13489
			Low Intensity	3.657 (3.570,3.744)	3.657 (3.604,3.711)	-0.034 (-0.070,0.002)	0.066	6723
			High Intensity	3.646 (3.593,3.699)	3.707 (3.624,3.790)	-0.040 (-0.076,-0.003)	0.033	6766
Adding 1	Log(Fortnightly Cases+1)	dec/jan 01-14	All	3.732 (3.687,3.777)	3.750 (3.706,3.794)	-0.030 (-0.054,-0.005)	0.020	13489
			Low Intensity	3.745 (3.664,3.826)	3.739 (3.689,3.788)	-0.025 (-0.057,0.007)	0.128	6723
			High Intensity	3.728 (3.679,3.777)	3.784 (3.707,3.861)	-0.035 (-0.068,-0.003)	0.033	6766

225 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation

226 (2). The outcome is a function of the Fortnightly Cases, during a period which starts 5 to 7 days after the event (Thanksgiving or

227 Christmas). 95% CI are reported in parentheses. Standard errors are clustered at the zip level.

228 **Table S6b. Effect of Intervention on Covid-19 Outcome (Thanksgiving campaign), robustness to functional form**

Specification	Outcome	Period	County treatment	Mean (CI 95%)		OLS model		Number of zip codes
				Treatment	Control	Treatment (CI 95%)	p-value	
Fortnightly cases zeros are omitted	Log(Fortnightly Cases)	dec/jan 01-14	All	3.700 (3.646,3.753)	3.660 (3.607,3.713)	-0.022 (-0.053,0.010)	0.172	6672
			Low Intensity	3.651 (3.540,3.762)	3.628 (3.567,3.690)	-0.025 (-0.072,0.021)	0.288	3239
			High Intensity	3.715 (3.654,3.776)	3.748 (3.644,3.853)	-0.019 (-0.061,0.024)	0.383	3433
Fortnightly cases zeros are replaced with min(positive Fortnightly cases)/2	Log(Fortnightly Cases)	dec/jan 01-14	All	3.632 (3.576,3.687)	3.597 (3.542,3.652)	-0.028 (-0.061,0.004)	0.089	6773
			Low Intensity	3.582 (3.466,3.698)	3.555 (3.490,3.619)	-0.017 (-0.066,0.032)	0.495	3294
			High Intensity	3.647 (3.584,3.711)	3.718 (3.612,3.824)	-0.039 (-0.083,0.005)	0.079	3479
Adding 1	Log(Fortnightly Cases+1)	dec/jan 01-14	All	3.714 (3.663,3.766)	3.679 (3.627,3.730)	-0.021 (-0.050,0.007)	0.145	6773
			Low Intensity	3.670 (3.563,3.778)	3.639 (3.580,3.699)	-0.010 (-0.053,0.032)	0.635	3294
			High Intensity	3.728 (3.669,3.787)	3.791 (3.691,3.890)	-0.032 (-0.071,0.007)	0.108	3479

229 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation
 230 (2). The outcome is a function of the Fortnightly Cases, during a period which starts 5 to 7 days after the event (Thanksgiving). 95%
 231 CI are reported in parentheses. Standard errors are clustered at the zip level.

232 **Table S6c. Effect of Intervention on Covid-19 Outcome (Christmas campaign), robustness to functional form**

Specification	Outcome	Period	County treatment	Mean (CI 95%)		OLS model		Number of zip codes
				Treatment	Control	Treatment (CI 95%)	p-value	
Fortnightly cases zeros are omitted	Log(Fortnightly Cases)	dec/jan 01-14	All	3.737 (3.681,3.793)	3.830 (3.775,3.884)	-0.049 (-0.078,-0.020)	0.001	6597
			Low Intensity	3.810 (3.696,3.924)	3.844 (3.781,3.906)	-0.050 (-0.090,-0.010)	0.015	3364
			High Intensity	3.711 (3.647,3.775)	3.787 (3.678,3.896)	-0.049 (-0.090,-0.007)	0.021	3233
Fortnightly cases zeros are replaced with min(positive Fortnightly cases)/2	Log(Fortnightly Cases)	dec/jan 01-14	All	3.666 (3.608,3.724)	3.742 (3.684,3.799)	-0.044 (-0.075,-0.013)	0.006	6716
			Low Intensity	3.727 (3.608,3.846)	3.757 (3.691,3.823)	-0.051 (-0.094,-0.008)	0.021	3429
			High Intensity	3.645 (3.578,3.711)	3.695 (3.580,3.811)	-0.037 (-0.082,0.008)	0.109	3287
Adding 1	Log(Fortnightly Cases+1)	dec/jan 01-14	All	3.750 (3.696,3.804)	3.821 (3.767,3.874)	-0.038 (-0.064,-0.011)	0.006	6716
			Low Intensity	3.815 (3.704,3.925)	3.835 (3.773,3.897)	-0.039 (-0.076,-0.002)	0.041	3429
			High Intensity	3.728 (3.666,3.789)	3.777 (3.670,3.884)	-0.036 (-0.075,0.002)	0.065	3287

233 *This Table gives the control and treatment means at the zip level, in addition to the estimate of the treatment coefficient in equation
 234 (2). The outcome is a function of the Fortnightly Cases, during a period which starts 5 to 7 days after the event (Christmas). 95% CI
 235 are reported in parentheses. Standard errors are clustered at the zip level.

236

237 **Section E. References**

238

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 240 Econom J 2018;21(1):C1-C68.

241

242 Supplement 2. Statistical Analysis Plan

243

244 The Statistical Analysis Plan can be accessed via this link:

245 <https://doi.org/10.1257/rct.6821-1.0.>

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