# Market Matters: The Effect of Big-City News on Rural America During the COVID-19 Pandemic

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This manuscript was compiled on June 15, 2020

Can 'urban-centric' local television news coverage of the COVID-1 19 pandemic affect the behavior of rural residents with lived ex-2 periences so different from their "local" news coverage? Lever-3 aging quasi-random geographic variation in media markets for 771 л matched rural counties, we show that rural residents are more likely 5 to practice social distancing if they live in a media market that is 6 more impacted by COVID-19. Individual-level survey responses from 7 residents of these counties confirm county-level behavioral differ-8 ences and help attribute the differences we identify to differences in 9 local television news coverage-self-reported differences only exist 10 among respondents who prefer watching local news and there are 11 no differences in media usage or consumption across media mar-12 13 kets. Although important for showing the ability of local television news to affect behavior despite urban-rural differences, the media-14 related effects we identify are at most half the size of the differences 15 related to partisan differences. 16

media effects | natural experiment | rural America | COVID-19

he ability of the news media to provide information to 1 the mass public is critical (1), especially during events 2 like the COIVD-19 pandemic when our understanding of the 3 disease, its spread, and government responses are changing 4 rapidly. The importance of accessing up-to-date information 5 about one's own community is critical precisely because the 6 impact of the COVID-19 pandemic varies tremendously across 7 localities in the United States. Although many have turned 8 to their local television news media as their primary source a of COVID-19 related information in response (2), the local 10 television news is not always local for some viewers. For many 11 12 of the rural residents in a media market, their daily experiences and concerns may be vastly different from the stories covered 13 by their local television news. 14

This discrepancy is important because the early outbreaks 15 of COVID-19 have mostly occurred in large cities. How rural 16 17 people respond to urban-focused COVID-19 news coverage 18 has critical, but uncertain, implications for better understanding the trajectory of the COVID-19 pandemic and how the 19 urban-rural divide may continue to impact American politics 20 and mass political behavior. On the one hand, stories focusing 21 on the public health consequences affecting nearby cities may 22 make rural residents more willing to engage in social distanc-23 ing behaviors to prevent outbreaks in their own communities. 24 25 Alternatively, exposure to 'urban-centric' pandemic coverage may cause rural Americans to be more likely to dismiss the 26 virus because of differences between their rural community and 27 the harder-hit urban communities portraved in local media. 28 Indeed, as Kathy Cramer persuasively argues in The Politics 29 of Resentment, perceptions that their communities are signif-30 icantly different from urban areas in ways that are unfairly 31 overlooked by politicians and the media lie at the core of the 32 American rural consciousness and resentment (3). If so, the 33

willingness of rural residents to dismiss the concerns being raised by an "urban-centered" news may undermine public health when collective responses are required.

Attempts to identify media effects have long been plagued 37 by issues of endogeneity, measurement error, and self-selection 38 (4). Comparing viewers and non-viewers leads to misleading 39 effects because of how different viewers are from non-viewers-40 including in how willing they are to seek out news in the current 41 high-choice media environment (5, 6). Experiments allow 42 researchers to better control for variation in media exposure<sup>\*</sup>, 43 but it is impossible to know whether the estimated effects 44 generalize or persist beyond the experimental condition. As a 45 result, recent studies rely on ambitious field experiments and 46 quasi-experiments to identify effects (8-13)—an approach we 47 follow. 48

To identify the effect of 'urban-centric' local television 49 news on rural residents, we leverage geographic variation in 50 media market coverage to compare otherwise similar rural 51 respondents living in media markets with varying levels of 52 COVID-19 severity. These comparisons are possible because 53 the United States is partitioned into 210 geographically defined 54 Designated Market Areas (DMA) that are generally centered 55 in an urban area<sup> $\dagger$ </sup> by Nielsen Media Research (14). Issues of 56 signal quality aside, every resident in a media market (DMA) is 57 theoretically able to receive the same set of broadcast channels. 58

We focus on local television news because it is the primary

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See (7) for recent innovation.

<sup>†</sup> A DMA refers to a set of counties that form an exclusive geographic area "in which the home market television stations hold a dominance of total hours viewed."

# **Significance Statement**

Despite the continued decline of local journalism, the COVID-19 pandemic reminds us of the importance of local news for keeping the public informed about their community. But because of how media markets are defined geographically, "local" television news is not equally local. For some rural residents, their local television news often focuses on urban communities with issues that are quite different from their own. We show that rural residents are more likely to engage in social distancing behavior than otherwise similar rural residents if their local news is produced in a city that is more impacted by COVID-19. Despite the urban-rural differences, coverage of the pandemic's impact in the more urban counties is able to slightly, but significantly, impact the willingness of rural residents to engage in social distancing.

E. K., M. S. and J.C. designed research, performed research, analyzed data, and wrote the paper. The authors declare no conflict of interest.

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Fig. 1. The top panel compares the distribution of the log number of COVID-19 cases in rural counties located in one of the 25 largest DMAs and the distribution in matched rural counties located in a media market outside the top 100 largest media markets. The bottom panel graphs the distribution occurring in the respective media market core county for these 771 rural counties. Horizontal lines denote the median number of cases. Because using a logged measure results in missing cases for counties with no confirmed cases of COVID-19, we recode these cases to be the minimum value in the sample with positive cases to avoid creating missing values. Appendix B reports a similar relationship using the logged number of cases per capita.

source of local news - nearly 60% of our sample report watch-60 ing local television news (compared to only 19% who report 61 reading local newspapers)<sup> $\ddagger$ </sup> and viewership of local television 62 news has only increased as a result of the pandemic. As a 63 recent industry study concludes: "the COVID-19 pandemic 64 is fueling a resurgence in viewership of local news and linear 65 television in the United States."<sup>§</sup> That said, we know that 66 local television news coverage varies from local newspaper 67 coverage (15-18), so we are careful to interpret our findings 68 in terms of local television news rather than local news more 69 generally. 70

Most important for the purpose of identifying media effects 71 is the fact that television media market boundaries create a 72 natural quasi-experiment where otherwise similar (and even 73 74 neighboring) rural counties are assigned to radically different media market centers and local news media. For example, resi-75 dents of Sullivan County, NY-a county located in the Catskill 76 mountains to the Northwest of New York City-receive their 77 "local" news from stations with headquarters in New York 78 79 City, but residents of neighboring Delaware County receive their local news from Binghamton, NY. Largely by chance, 80 depending on where they live, otherwise similar rural resi-81 dents receive their local news from stations located in cities 82 experiencing substantially different versions of the COVID-19 83 outbreak. Because local television news outlets are known to 84 prioritize the concerns of core cities in a media market (19), 85 variation in the impact of COVID-19 pandemic across urban 86 87 creates variation in local news coverage of the public health consequences of COVID-19. 88

This difference matters. Using data on the percentage of county residents staying home according in 771 otherwise similar rural counties and a survey of nearly 9,000 white rural 91 residents of those counties, we show that rural residents engage 92 in more social distancing if they happen to live in a media 93 market whose local television news is produced in a city that 94 is more impacted by COVID-19 than otherwise similar rural 95 residents who receive their local news from less-impacted cities. 96 Our ability to eliminate confounding explanations—e.g., the 97 increase in social distancing only occurs among otherwise sim-98 ilar individuals who report watching the local news—suggests 99 that the differences we identify are attributable to differences 100 in local television news coverage. 101

Concerns about the erosion of democratic accountability 102 often arise when *local* news focuses largely on the concerns of 103 distant communities—especially in a fragmented media envi-104 ronment that is increasingly dominated by national concerns 105 (20). Local journalism is often thought important for the pub-106 lic interest because of its ability to inform individuals about 107 local issues than can counterbalance the negative effects of par-108 tisan events covered by the national news coverage. Whether 109 the local media is able to perform such role is unclear and the 110 case we examine is a hard one for media effects-focusing on 111 whether urban-centric television news can change the behav-112 ior of rural Americans despite substantial community (and 113 partisan) differences in the subject and the audience and also 114 the nature of local television news. The positive effects we 115 find are reassuring from a public health perspective, but the 116 relative magnitudes of the effects are notably smaller than 117 important countervailing factors such as Republican partisan-118 ship and gender—suggesting that there are important limits 119 to the effect that local television news can have on changing 120 behavior. 121

<sup>&</sup>lt;sup>‡</sup> See Appendix K for more details. <sup>§</sup> https://www.tvtechnology.com/news/local-news-linear-tv-see-resurgence-during-covid-19-says survey



Fig. 2. Panel (a) shows the difference in the distribution of county-level social distancing using two different measures of urban media market type. Panel (b) shows predicted change in % Stay at home from a one-standard deviation change in each variable from three models using three different measures of urban media market type. Positive values indicate increased social distancing.

### 122 Data and Research Design

To identify the effect of differences in local television news 123 coverage of COVID-19 we compare otherwise similar residents 124 of rural counties—defined by the U.S. Census as having less 125 than 400 people per square mile—who differ in whether their 126 local television news is from one of the top 25 largest media 127 markets or from outside the top 100 media markets. To do 128 so, we use county demographics to match every rural county 129 located in a top 25 media market to its most similar county 130 located in a outside-the-top-100 media market. 131

To characterize the difference in media markets and rural 132 counties in terms of the incidence of COVID-19, Figure 1 133 graphs the distribution of confirmed COVID-19 cases as of 134 April 1, 2020 in the 771 rural counties we examine (top) 135 relative to the largest county of the associated media market 136 for these rural counties (bottom) using a log scale to correct 137 for outliers. As the figure makes clear, the distribution of 138 the incidence of COVID-19 in our 771 matched rural counties 139 140 is nearly identical regardless of whether the county is in a 141 populous media market or not. In contrast, there are far more confirmed COVID-19 cases in the counties containing 142 the local television news stations in the larger media markets. 143 Moreover, the incidence of COVID-19 cases in media markets 144 outside the top 100 DMAs are far more similar to our sample 145 of rural counties than is the distribution of COVID-19 cases 146 in the larger media markets. Because local news coverage is 147 typically driven by issues affecting the most populous county 148 of the media market, our identification strategy leverages the 149 differences in Figure 1 to determine if the differential impact 150 of COVID-19 in the larger media market increases the social 151 distancing behavior of residents of rural counties with similar 152 numbers of COVID-19 cases. 153

Identifying the consequences of the differences displayed 154 in Figure 1 on social distancing behavior requires addressing 155 ecological inference concerns and eliminating confounding ex-156 planations for behavioral differences that may co-vary with 157 media market size. To do so, we survey 9,081 white respon-158 dents with internet access from the 771 matched rural counties 159 between April 6 and 14 using Lucid.io.\*\* We collect informa-160 tion on media usage, COVID-19 concerns, and self-reported 161 social distancing behaviors (if any). As expected given the 162 county-level sample balancing we employ, rural respondents 163 are nearly identical in terms of demographics and other poten-164 tially confounding factors regardless of whether they reside in 165 a top media market or not (Appendix B). Respondents also 166 do not differ in their media usage or attitudes towards the 167 news media in general, among those who prefer local news, 168 or among those that report that they do not watch the local 169 news (Appendix D). 170

Although there are no statistically distinguishable differ-171 ences in terms of who prefers to watch local television news 172 across media markets, rural residents in top 25 media markets 173 are less approving, on average, of local news coverage of the 174 COVID-19 pandemic compared to their counterparts in media 175 markets outside the top 100 (Appendix E). This difference 176 is reassuring given the discrepancy in COVID-19 incidence 177 graphed in Figure 1—we would expect the dramatic difference 178 in COVID-19 cases to create a mismatch between local tele-179 vision news coverage and local rural experiences to increase 180 the disapproval of local news coverage for rural residents liv-181 ing in a media market whose core county is more impacted 182 by COVID-19. We interpret the increased dissatisfaction as 183 revealing that rural residents are more dissatisfied with their 184 local television news coverage when the incidence of COVID-185 19 is much more prevalent in the core media market county 186 than it is in their own rural county of residence. Whether 187 this increased dissatisfaction results in an inability of local 188 television news to impact the behavior of rural residents is the 189

<sup>&</sup>lt;sup>¶</sup>We follow the process outlined in (21). Appendix B reports the similarity of the 771 matched counties using the 2014 5-year average of the 2010 U.S. Census.

<sup>&</sup>lt;sup>II</sup> We choose April 1, 2020 because our survey of rural residents asking about their social distancing behavior "last week" was launched on April 6. We also chose this date because both April 1, 2019 and April 1, 2020 are weekdays and comparing the percentage of residents who are staying at home year-over-year is therefore a more meaningful comparison. Appendix X presents the relationship using a per capita measure to show a similar relationship but we focus on the number of cases for expositional purposes because the logged per capita distributions are all negative.

<sup>\*</sup>We ultimately recruited respondents from 705 of the 771 matched counties. We focus on white respondents to maximize our statistical power and avoid differences due to race and ethnicity, but the rural counties we analyze are roughly 85-90% white on average. See Appendix L for the wording of the the survey questions we analyze.

<sup>190</sup> question to which we now turn.

## 191 Differences in County-Level Social Distancing

<sup>192</sup> To determine whether the urban-centric local news coverage <sup>193</sup> of COVID-19 in larger media markets affects the social dis-<sup>194</sup> tancing behavior of rural residents we rely on the county-level <sup>195</sup> percentage of cellular devices staying at home reported by <sup>196</sup> *Cuebig.com* for the week of April 1, 2020.<sup>††</sup>

To begin, panel (a) of Figure 2 compares how the percent-197 age of residents staying home in our matched rural counties 198 vary depending on whether they are located in a one of the 199 most populous media markets (top) or in one of the most 200 COVID-19 impacted media markets (bottom). Regardless of 201 the measure used, the distribution of raw data reveals that 202 a higher percentage of residents are staying home in rural 203 counties located in top media markets. 204

To probe whether this relationship persists after controlling 205 for the many ways in which the counties may vary, panel (b) 206 presents the results of predicting the percentage staying home 207 in a county on April 1, 2020 as a function of whether the 208 county is located in an "urban"' media market, the logged 209 number of COVID-19 cases in the county per capita, whether 210 the county was under a "stay at home" order, population 211 density, median income, percentage of county residents that 212 are white, percentage of residents with a high school education 213 or less and the two-party vote share for President Trump in 214 the 2016 presidential election. 215

To ensure our results are robust, we measure the treatment using three different measures: an indicator for whether the rural county was in one of the 25 most populous media markets, an indicator for whether the rural county is in one of the most Top 25 COVID-19 impacted media markets, and a continuous measure based on the logged number of COVID-19 cases in the most populous county in the media market.<sup>‡‡</sup>

The effects graphed in Figure 2 reveal more social distancing 223 in rural counties located in top 25 media markets relative to 224 the social distancing that is observed in otherwise similar rural 225 counties in "outside the top 100" media markets. This is true 226 regardless of the measure we use to measure how the severity 227 of the pandemic might impact local television news coverage. 228 In addition, we also reassuringly find more social distancing 229 effects in counties under stay at home orders and with larger 230 numbers of confirmed cases of COVID-19. Reflecting the 231 importance of elite partisan cues even during the pandemic, 232 the more a county supported President Trump in the 2016 233 presidential election, the less likely its residents were to engage 234 in social distancing all else equal.<sup>§§</sup> Even so, rural residents 235 of a county in a top 25 media market were 1 percentage point 236 more likely to stay at home than than rural residents in similar 237 counties located in media markets outside the top 100-an 238 effect that is roughly half the size of a stay at home order. 239

#### 240 Differences in Individual-Level Social Distancing

The county-level results of Figure 2 are suggestive, but in-  $\[Table S19 in Appendix F replicates the results using logistic regressions to confirm that the results$ complete because they rely on aggregate relationships. To

<sup>§§</sup>This finding mimics results reported by (22, 23).

validate our interpretation, we use a survey of rural residents 243 of these matched counties to rule out confounding differences 244 in media usage and show that similar differences emerge at 245 the individual-level even after controlling for individual-level 246 differences in demographics, political orientations, and me-247 dia usage. Our survey also allows us to better examine our 248 proposed mechanism because we are able to conform that 249 the differences in self-reported social distancing behavior only 250 occurs among those who report watching their local television 251 news. 252

Table 1 presents the results of using least-squares regression 253 to predict whether white rural residents are more likely to 254 report engaging in social distancing if they live in an urban 255 media market and they also watch their "local" television 256 news.<sup>11</sup> Specifications (1) through (4) predict whether the 257 respondent chooses "I stay at home and only go out to get food 258 or medicine" when asked "Which of the following are you doing 259 because of the coronavirus outbreak?" and specifications (5) 260 to (8) report the results for predicting whether a respondent 261 reports "I wear a mask when I go outside." For each response, 262 we present the estimated effect of residing in a top 25 media 263 market or top 25 most COVID-19 impacted media market (Top 264 25 DMA and Top 25 COVID Core) for those who report that 265 they do not consume local news (specifications (1), (2), (5), (6)) 266 and those who do (specifications (3), (4), (7), (8)).\* \* If local 267 television news is responsible for increased social distancing, we 268 should only detect differences between media markets among 269 local news watchers. 270

The results in Table 1 are consistent with the county-level 271 social distancing results summarized in Figure 2. First, the 272 positive and statistically significant effect for Top 25 DMA and 273 Top 25 COVID Core observed in specifications (3), (4), (7), (8)274 reveals that white rural residents who happen to receive their 275 local television news from a top 25 media market are more 276 likely to stay at home, and more likely to wear a mask outside 277 than their counterparts in a media markets outside the top 278 100 among those who watch their local television news. 279

Second, we only observe differences among those who report 280 watching local television news – we observe no difference in 281 social distancing behavior (specifications (1),(2),(5),(6)). This 282 is precisely the pattern we would predict if the differences 283 in social distancing we detect in the county-level analysis 284 are due to differences in local television news coverage of 285 COVID-19. If other factors were responsible for the county-286 level differences reported in Figure 2 we would expect to 287 find behavioral differences among those who live in the same 288 communities but who do not consume local television news. 289 Instead, only those who prefer watching local news engage in 290 more social distancing behavior.<sup>†††</sup> 291

It is also reassuring that the magnitude of the effects we identify in our individual level analysis are roughly similar to the magnitude we detect in our county-level analysis using different data and different specifications. Our county-level

<sup>&</sup>lt;sup>††</sup>Appendix C shows the results are robust to using the yearly change in the percentage staying at home.

<sup>&</sup>lt;sup>‡‡</sup>Our results are robust to using a per capita measure (Appendix G), but we use the raw count because news programs typically reported the number of cases rather than the population-adjusted number of cases. If the effects are due to media coverage as we claim, social distancing should therefore vary according to the number of cases as that was the number being widely publicized.

Table S19 in Appendix F replicates the results using logistic regressions to confirm that the results are statistically distinguishable from zero. Appendix H reveals that there is also a relationship with increased concerns about catching COVID-19 among local television news watchers in larger media markets.

<sup>\*\*\*</sup> Appendix G replicates the results using treatments defined using: the number of COVID-19 cases, the number of COVID-19 cases per capita, the number of COVID-19-related deaths, and the number of COVID-19 deaths per capita. Similar results obtain regardless of the measure used to distinguish media markets.

<sup>&</sup>lt;sup>††</sup> Also important for our interpretation is the fact that who chooses to watch local television news does not vary by media market (Appendix K).

#### Table 1. The Effects of Residing in Urban DMA in Self-Reported COVID-19 Social Distancing Behaviors

	Pr(Stay Home)				Pr(Wear Mask Outside)			
	No Local		Local		No Local		Local	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Top 25 DMA	-0.02		0.03**		0.03		$0.03^{*}$	
	(0.02)		(0.01)		(0.02)		(0.01)	
Top 25 Covid Core	. ,	-0.02	. ,	$0.04^{**}$	. ,	0.02		$0.04^{**}$
		(0.02)		(0.01)		(0.02)		(0.01)
Stay at Home Order	0.000	-0.000	0.01	0.01	$0.03^{+}$	$0.03^{+}$	0.01	0.01
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
log(COVID county cases per capita)	0.003	0.004	0.01	0.01	0.01	0.01	0.03**	0.03**
	(0.01)	(0.01)	(0.005)	(0.005)	(0.01)	(0.01)	(0.01)	(0.01)
Democrat	0.19**	0.19**	0.07**	0.07**	0.11**	0.11**	0.08**	0.08**
	(0.02)	(0.02)	(0.01)	(0.01)	(0.03)	(0.03)	(0.02)	(0.02)
Republican	0.09**	0.09**	0.02	0.02	-0.01	-0.02	$-0.03^{+}$	$-0.03^{+}$
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Age	0.003**	0.003**	0.003**	0.003**	0.004**	0.004**	0.004**	0.004*
	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.001)	(0.000)	(0.000)
Weekly Church Attend	0.000	0.000	-0.01	-0.01	0.07**	0.07**	0.02	0.02
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)
Child at Home	0.01	0.01	0.04**	0.03**	0.03	0.03	0.01	0.01
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Parent in Elderly Home	-0.13**	-0.13**	-0.06**	-0.06*	-0.004	-0.005	0.02	0.02
	(0.03)	(0.03)	(0.02)	(0.02)	(0.04)	(0.04)	(0.03)	(0.03)
HS Educ. or Less	-0.09**	-0.09**	-0.04**	-0.04**	-0.07**	-0.07**	-0.04**	-0.04**
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
College Educ. or More	0.03	0.03	0.03*	0.03*	-0.01	-0.01	0.03*	0.03*
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Male	-0.11**	-0.11**	-0.09**	-0.09**	$-0.04^{*}$	-0.04*	-0.04**	-0.04**
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Unemployed	0.04*	0.04*	0.04**	0.04**	0.01	0.01	-0.01	-0.02
	(0.02)	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)
Constant	0.56**	0.57**	0.67**	0.65**	0.20*	0.20*	0.44**	0.42**
	(0.07)	(0.07)	(0.05)	(0.05)	(0.08)	(0.08)	(0.06)	(0.06)
Observations	3,007	3,007	6,014	6,014	3,007	3,007	6,014	6,014
$R^2$	0.09	0.09	0.05	0.05	0.05	0.05	0.04	0.04

Note: Standard errors are in parentheses. + p<0.1; \* p<0.05; \*\* p<0.01; \*\*\* p<0.01

analyses reported in Figure 2 reveled an effect size of roughly 296 1 percent. Specifications (2) and (4) in Table 1 reveal an 297 individual-level effect size of either 0.03 or 0.04 (with a stan-298 dard error of 0.01). Because only 60% of our sample report 299 consuming local television news, this means that the implied 300 county-wide difference in social distancing is between 1.8 per-301 cent  $(0.03 \times 0.6)$  and 2.4  $(0.04 \times 0.6)$  percent plus or minus 302 1.18 percent  $(0.01 \times 1.96 \times 0.6)$  for each. Thus, the implied 303 county level effects of our individual-level analyses are reas-304 suringly consistent with the effect sizes we estimate in our 305 county-level analyses. 306

Several other political and demographic factors also affect 307 self-reported social distancing. Male respondents are signif-308 icantly less likely to stay at home or wear a mask outside. 309 Those with a high school education or less are also less likely 310 to engage in social distancing behaviors, and college educated 311 local news watchers are more likely to do so. The elderly are 312 also reassuringly more likely to engage in social distancing. 313 Partisanship obviously also clearly matters ; Democrats are 314 much more likely to engage in social distancing than either 315 independents or Republicans.<sup>‡‡‡</sup> 316

317 The media effects we find are important, but it is impor-

tant to highlight that the effects we are able to attribute to 318 differences in local news coverage are smaller than partian 319 and gender differences. Rural white residents in a top 25 me-320 dia market who prefer local news (specification (3)) are more 321 likely to report staying home except for when obtaining food 322 and medicine by 3 percentage points, but this difference is 323 substantially smaller than the 7 percentage-points difference 324 between Democrats and independents or the 8 percentage-325 point difference between men and women. Living in a Top 326 25 COVID-19-impacted media market also makes local news 327 watchers 4 percentage points more likely to report wearing 328 mask outside (specification (8)), but Democrats are 8 per-329 centage points more likely than independents to wear a mask. 330 Even in the presence of a pandemic, partisanship and other 331 demographic-related have a considerable affect on individual 332 behavior – although there is also evidence that local television 333 news coverage can help change individual behavior. 334

#### Discussion

As result of the geographically varying public health consequences of the COVID-19 pandemic, many Americans have turned to their local television news for information about their local community(24). The resulting surge in local television news viewership is unique, especially given the ongoing decline in local journalism and the increasingly segmented media environment. However, "local" news is not always local

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<sup>&</sup>lt;sup>‡‡‡</sup>The fact that the partisan and demographic differences we detect are larger among those who prefer not to watch local news is suggestive of selection effects and the importance of accounting for local news consumption—Democrats who prefer national news (or no news at all) are more likely to engage in social distancing than Democrats who prefer local news likely reflects differences in the type of Democrats.

and whether individuals are able to receive local television 343 news that focuses on the issues relevant to their community 344 can vary because of how media markets are geographically 345 defined in the United States. The local news for some rural 346 347 residents may focus on the lives and experiences of urban 348 communities far different from their own—perhaps especially during a pandemic that has impacted urban areas much harder 349 than rural areas to date. 350

These differences can lead rural individuals to feel ignored 351 by political and media elites (3) and this can undermine the 352 effectiveness of local television news during a crisis. In fact, 353 rural Americans report large levels of dissatisfaction with 354 their local news coverage.<sup>§§§</sup> Despite the potential for rural 355 resentment of urban news media to prevent it from affecting 356 the behavior of rural residents because of rural and urban 357 differences, we show that local television news can still play 358 an important role in affecting viewers' behaviors. 359

From a public health perspective, the effects of the urban-360 centric news we identify are normatively positive, but also 361 limited. Our results show that rural individuals who may 362 have otherwise been predisposed to be less likely to engage 363 in social distancing during the COVID-19 outbreak are more 364 likely to do so than similar rural individuals because they 365 happen to receive their local television news from one of more 366 impacted cities. This is true even though they are also more 367 disapproving of their local news coverage of the pandemic. 368

However, the effects of local television news we identify are 369 limited—even during a pandemic when local news is arguably 370 most important. In addition to being able to avoid local news 371 coverage by choice, our results show that the effects of exposure 372 are unable to fully compensate for partian differences even 373 among those who consume local television news. The ability 374 of local news media to bridge the urban-rural behavioral gap 375 is reassuring, but also limited. 376

 ACKNOWLEDGMENTS. We thank the Center for the Study of Democratic Institutions at Vanderbilt University for the financial support required to conduct the original survey we conduct. We are grateful for the editor and two anonymous reviewers whose suggestions significantly improved our manuscript.

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§§§ Consider this quote from a rural Wisconsinite in Cramer's The Politics of Resentment (3). "This big building burned in some area.' It's all over the news. [But if] some farmer loses his barn...it barely gets three seconds" (63).

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