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9   IN THE SUPERIOR COURT FOR THE STATE OF WASHINGTON
       IN AND FOR KING COUNTY

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11   WASHINGTON LEAGUE FOR
     INCREASED TRANSPARENCY &
     ETHICS, a Washington non-profit   **No. 20-2-07428-4 SEA**
12   corporation.

13   **WASHLITE'S RESPONSE ON**
                                  Plaintiff,   **MOTION TO DISMISS**

14

     v.
15

16   FOX CORPORATION, a Delaware
     corporation; FOX NEWS NETWORK, LLC,
17   a Delaware corporation d/b/a FOX NEWS
     CHANNEL; FOX BUSINESS NETWORK, a
18   for profit company d/b/a/ FOX BUSINESS;
     JOHN MOE and JANE MOE, 1-100,,
19
                                  Defendants.
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I.   <u>**INTRODUCTION**</u>

In a very generalized brief, the Fox defendants (Fox) claim broad protection under the First Amendment claiming to be on equal footing with newspapers and broadcast television stations. In so doing, Fox cites no authority supporting the proposition that a cable television programmer, operating on a private cable television system owned and operated by another entity, has such protections. Rather, it seeks protection within the case law relating to print media such as the Seattle Times or the New York Times or the Washington Post or other newspaper. WASHLITE does not disagree that newspapers and broadcast television stations enjoy certain protections under the First Amendment[1] as the numerous cases on the point make clear. *E.g. Columbia Broad. Sys., Inc. v. Democratic Nat'l Comm.*, 412 U.S. 94, 117-18 (1973) ("A broadcast licensee has a large measure of journalistic freedom but not as large as that exercised by a newspaper.*"); Miami Herald Publishing Co. v. Tornillo,* 418 U.S. 241, 256-258 (1974); *New York Times Co. v. Sullivan,* 376 U.S. 245 (1964). However, Fox is not a newspaper and is not sued in this action for the programming on its broadcast television stations. *Amended Complaint, passim.* Rather, Fox is a cable programmer providing content to be presented on a private cable system owned by entities such as AT&T, Comcast, Spectrum and others. As is shown below, this case raises an entirely different set of questions than the

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[1] The term "First Amendment" as used in this brief refers, generally to the First Amendment of the Federal Constitution which states: " U.S. CONST. AMEND I. The right to speak and publish under the Washington Constitution is Article 1, §5 which provides: "Every person may freely speak, write and publish on all subjects, being responsible for the abuse of that right." CONST. ART. I, §5.

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protection of the First Amendment rights afforded to newspapers and broadcast television stations.

The United States Supreme Court has long recognized that cable programmers do not have First Amendment rights on the cable medium. *Denver Area Educ. Telcoms. Consortium, v. FCC,* 518 U.S. 727, 812-826 (1996) (J. Thomas, Rehnquist & Scalia concurring). Rather, the law is that only cable operators, such as AT&T, Comcast and Spectrum, enjoy First Amendment rights on their privately owned cable systems. *Id. and cases cited therein.*

Additionally, cable television has long been subject to consumer protection statutes. The Cable Television Consumer Protection and Competition Act of 1992 (Cable Act), which governs cable television, is itself a consumer protection act. 47 USC §521-571. Under Washington's Consumer Protection Act, RCW 19.86, unfair and deceptive acts may be enjoined, damages and fees may be recovered. Fox's repeated claims that the COVID-19 pandemic was/is a hoax is not only an unfair act, it is deceptive and therefore actionable under Washington's Consumer Protection Act. RCW 19.86.

II.   EVIDENCE RELIED UPON

This response is based on the pleadings and files herein and the following evidence:

1.   Declaration of Arthur West;

2.   Declaration of Lori Shavlik;

3.   Declaration of David Koenig; and,

4.   Declaration of Jacob Cuzdey.

III.   FACTS

The facts stated in the Amended Complaint (DKT 25) are incorporated herein.

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IV.   ISSUES PRESENTED

Whether a cable television channel is entitled to First Amendment protections for content it broadcasts on a private cable television system owned by another entity?

Whether a cable television channel has violated the Washington Consumer Protection Act RCW 19.86, by broadcasting content claiming that COVID-19 is a hoax to subscribers of a private cable television system thereby deceiving Washington consumers?

V.   AUTHORITIES & ARGUMENT

A.   STANDARDS APPLICABLE TO A MOTION TO DISMISS

Fox identifies its motion as a "motion to dismiss" and at page 15 claims "plaintiffs [sic] fail to state claim under Washington law." However, it fails to identify under which standard its motion is brought as it does not cite to the Civil Rules. Both CR 12 and CR 56 provide a process by which a case may be dismissed. Both are addressed below.

1.   Under CR 12, the facts allected in the Amended Complaint are treated as true

In Washington state, a liberal standard is applied to pleadings subject to a motion to dismiss under CR 12.[2] Here, it seems the most applicable portions of CR 12 are subsections (b)(6) and (c). "Motions under CR 12(b)(6) and 12(c) raise identical issues, whether a request

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[2] The federal standard set forth under *Bell Atl. Corp. v. Twombly*, 550 U.S. 544 (2007) does not apply in Washington State. *McCurry v. Chevy Chase Bank,* 169 Wn.2d 96, 101-102, 233 P.3d 861 (2010). In *McCurry,* the *Twombly* standard was rejected, in part, because that standard allows a judge to dismiss a claim "if that judge does not believe it is plausible the claim will ultimately succeed." *Id.* at 102. The Washington Supreme Court has a general distaste for the summary dismissal of claims before discovery occurs and outside the province of a fact finder. *See cases cited herein and Davis v. Cox*, 183 Wn.2d 269, 351 P.2d 862 (2015) (RCW 4.24.525(4)(b) violates the right to a jury trial as it requires a judge to adjudicate factual questions in non-frivolous claims without a trial.); *see also* L. Knapp*, Origin*

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for relief states a claim for which a court can grant relief …" *Didlake v. State*, 186 Wn. App. 417, 422, 345 P.3d 43 (2015). On a motion under CR 12(b)(6) and CR 12(c), "The factual allegations contained in the complaint are accepted as true."[3] *Parilla v. King County,* 138 Wn. App. 427, 431-432, 157 P.2d 879 (2007). "[A]ll reasonable inferences are drawn in the plaintiff's favor." *Gorman v. City of Woodinville,* 175 Wn.2d 68, 71, 283 P.3d 1082 (2012). The "court may consider hypothetical facts not included in the record." *Holiday Resort Comm. Assoc. v. Echo Lake Assoc., LLC,* 134 Wn. App. 210, 135 P.3d 499 (2006). Additionally, under CR 8,

> It is well established that pleadings are to be liberally construed; their purpose is to facilitate proper decision on the merits, not to erect formal and burdensome impediments to the litigation process. If a complaint states facts entitling the plaintiff to some relief, it is immaterial by what name the action is called. Furthermore, initial pleadings which may be unclear may be clarified during the course of summary judgment proceedings.

(Citations omitted.) *State v. Adams*, 107 Wn.2d 611, 620, 732 P.2d 149 (1987).

> CR 12(b)(6), read together with CR 8(a)(1), requires the court to decide whether the allegations in a complaint constitute a short and plain statement of the claim showing that the pleader is entitled to relief. The court need not accept legal conclusions as correct. When an area of the law involved is in the process of development, courts are reluctant to dismiss an action on the pleadings alone by way of a CR 12(b)(6) motion.

(Other citations omitted.) *Haberman v. Wash. Pub. Power Supply Sys.,* 109 Wn.2d 107, 120, 744 P.2d 1032 (1987). As is shown below, this case is not properly dismissed under CR 12.

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of the Constitution of the State of Washington, The Washington Historical Quarterly, Vol. IV, No. 4, 234-236 (1913) (on the importance of a jury trial).
     [3] Given this standard, a recitation of the facts in this response has been omitted.

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2. Under CR 56, all inferences are in WASHLITE's favor

Here, Fox has asked the court to take judicial notice of certain "transcripts" attached to its motion. *Motion, p. 4.* In so doing, it is asking the court to consider matters beyond the Amended Complaint thus appearing to convert its motion to one for summary judgment.

> A CR 12(b)(6) motion may be granted only where there is not only an absence of facts set out in the complaint to support a claim of relief, but there is no hypothetical set of facts that could conceivably be raised by the complaint to support a legally sufficient claim. *San Juan County v. No New Gas Tax*, 160 Wn.2d 141, 164, 157 P.3d 831 (2007). Consideration of extraneous materials on a CR 12(b)(6) motion is permissible so long as the court can say "no matter what facts are proven within the context of the claim, the plaintiffs would not be entitled to relief." *Haberman v. Wash. Pub. Power Supply Sys.*, 109 Wn.2d 107, 121, 744 P.2d 1032, 750 P.2d 254 (1987). Otherwise, the complaint must be transmuted into a motion for summary judgment. CR 56. For the foregoing reasons, CR 12(b)(6) motions are granted only "'sparingly and with care.'" *Orwick v. City of Seattle*, 103 Wn.2d 249, 254, 692 P.2d 793 (1984) (quoting 27 FEDERAL PROCEDURE PLEADINGS AND MOTIONS §62:465 (1984)).

Worthington v. WestNET, 182 Wn.2d 500, 505-06, 341 P.3d 995 (2015).

ER 201 provides that judicial notice may be taken only of adjudicative facts. An "adjudicative fact" is a "controlling or operative fact, rather than a background fact; a fact that concerns the parties to a judicial or administrative proceeding and that helps the court or agency determine how the law applies to those parties." *In re Disciplinary Proceeding Against Sanai*, 177 Wn. 2d 743, 753 n.3, 302 P.3d 864 (2013). ER 201(b) defines a judicially noticed fact as one which is **"**not subject to reasonable dispute in that it is either (1) generally known within the territorial jurisdiction of the trial court or (2) capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned." ER 201(b).

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Here, the content within the offered "transcripts" do not meet the definition of an adjudicative fact. There is no accompanying affidavit with these "transcripts" certifying their authenticity or accuracy. *Cf.* CR 30(f). Further, Fox, in a telling omission, does not claim that the "transcripts" are self-authenticating as a news story under ER 902(f).[4] There is no case in Washington or in any court in the United States[5] extending ER 902(f) to unauthenticated documents purporting to be "transcripts" of cable television programming.

Given this, the motion has been converted to a motion for summary judgment by Fox. "Summary judgment is proper only when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. CR 56(c). The court considers "all facts and reasonable inferences in the light most favorable to the nonmoving party, but the nonmoving party may not rely on speculation." *Specialty Asphalt & Constr., LLC v. Lincoln Cty.*, 191 Wn. 2d 182, 191, 421 P.3d 925 (2018). "If reasonable minds could draw different conclusions from undisputed facts, or if all of the facts necessary to determine the issues are not present, summary judgment is improper." *Ward v. Coldwell Banker/San Juan Props.*, 74 Wn. App. 157, 161, 872 P.2d 69 (1994).

Not all the necessary facts are present to determine this case as a matter of law. This case is in its infancy. No discovery has occurred. On this basis alone the motion should be denied to allow for discovery and a full development of the relevant facts. CR 56(f).

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[4] The rule provides: "Extrinsic Evidence of authenticity as a condition precedent to admissibility is not required with respect to the following: … (f) Newspapers and Periodicals. Printed materials purporting to be newspapers or periodicals."

[5] The undersigned was not able to locate any such case through a search on Lexis.

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B. **CABLE TELEVISION DOES NOT STAND ON EQUAL FOOTING AS PRINT MEDIA OR BROADCAST TELEVISION**

Fox cites to no Washington case or federal case which confirms that a cable television programmer/content provider has an independent First Amendment right when using a system owned and operated by a cable operator. Nor has it cited to a case that equates a content provider on a cable system to that of a newspaper or broadcast television station. In fact, the law is just the opposite: cable programmers, such as Fox is, have no such rights when using a cable system owned by a separate entity.

Denver Area Educ. Telcoms. Consortium, v. FCC, 518 U.S. 727 (1996) is instructive.[6] There, the Supreme Court was asked to decide upon the constitutionality of certain provisions of the Cable Act which contained provisions requiring access to cable television systems for public access channels and restricted programming which "depicted sexual or excretory activities or organs in a patently offensive manner." *See* 47 USC §532(h) and (j). The Court concluded that portions of the challenged provisions were constitutional, and others were not.

Justices Thomas, Rehnquist and Scalia concurred in part and dissented in part and filed a separate opinion. 518 U.S. at 812-826. By way of a summary, these Justices stated that cable programmers using a private cable system owned by another have no independent constitutional right to speak through the cable medium as recognized by the progression of the law through a number of cases.[7] Justice Thomas stated:

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[6] This concurring opinion provides a summary of the development of the law relating to cable operators and cable programmers at 518 U.S. at 812-817.

[7] The cases reviewed by Justices Thomas, Rehnquist and Scalia include, in the following order: *Red Lion Broadcasting Co. v. FCC,* 395 U.S. 367 (1969); *Columbia Broad. Sys., Inc. v. Democratic*

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We implicitly recognized in *Turner*[8] that the programmer's right to compete for channel space is derivative of, and subordinate to, the operator's editorial discretion. Like a free-lance writer seeking a paper in which to publish newspaper editorials, a programmer is protected in searching for an outlet for cable programming, but has no free-standing First Amendment right to have that programming transmitted. Cf. *Miami Herald Publishing Co.* v. *Tornillo*, 418 U.S. at 256-258.

518 U.S. at 816-17. This statement is consistent with other cases which hold that First

Amendment rights do not exist on private property. *Lloyd Corp. v. Tanner*, 407 U.S. 551

(1972) (First Amendment rights not applicable to a shopping mall which is not dedicated to

public use). In *Lloyd,* the court stated:

We hold that there has been no such dedication of Lloyd's privately owned and operated shopping center to public use as to entitle respondents to exercise therein the asserted First Amendment rights.

Id. at 570. Here, the same is true: there is no evidence that any cable operator operating in

Washington State has dedicated any portion of their cable systems to public use. Given this, no

First Amendment rights exist on them.

There is no discernable difference between the cable systems operated by AT&T,

Comcast, Spectrum and other cable operators and the owner of a shopping mall—both

constitute private property. Further, Fox is not a "cable operator" under the Cable Act. The

term is defined as follows:

the term "cable operator" means any person or group of persons (A) who provides cable service over a cable system and directly or through one or more

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Nat'l Comm., 412 U.S. 94 (1973); *Miami Herald Publishing Co. v. Tornillo,* 418 U.S. 241 (1974); *Los Angeles v. Preferred Communications, Inc.,* 476 U.S. 488 (1986); *Leathers v. Medlock,* 499 U.S. 439 (1991); *Turner Broad. Sys. v. FCC,* 512 U.S. 622 (1994); and *Pacific Gas & Elec. Co. v. Pub. Util. Comm'n of Cal.,* 475 U.S. 1 (1996).
[8] *Turner Broad. Sys. v. FCC,* 512 U.S. 622 (1994).

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affiliates owns a significant interest in such cable system, or (B) who otherwise controls or is responsible for, through any arrangement, the management and operation of such a cable system;[9]

47 USC §521(5). There is no evidence in this record that Fox owns and operates a cable service over a cable system in Washington State. As stated in the Amended Complaint, the cable operators known to operate in Washington State include AT&T, Comcast, and Spectrum and perhaps others. *Amended Complaint, ¶*4.4-4.11. Fox, on the other hand, operates as a cable programmer[10] as that term is used in case law as above cited. As such, it does not have First Amendment protections on the cable medium.

Moreover, constitutional rights are not unlimited. *See District of Columbia v. Heller*, 554 U.S. 570, 626 (2008) ("Like most rights, the right secured by the Second Amendment is not unlimited.). It has long been the rule of law in the United States that the exercise of such rights is not an unrestricted license to do as one pleases.

the possession and enjoyment of all rights are subject to such reasonable conditions as may be deemed by the governing authority of the country essential to the safety, health, peace, good order and morals of the community. Even liberty itself, the greatest of all rights, is not unrestricted license to act according to one's own will. It is only freedom from restraint under conditions essential to the equal enjoyment of the same right by others. It is then liberty regulated by law.

Crowley v. Christensen, 137 US 86, 89–90 (1890). And in *Jacobson v. Massachusetts*, 197 US 11 (1905), the Supreme Court noted:

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[9] "[T]he term "cable service" means—(A) the one-way transmission to subscribers of (i) video programming, or (ii) other programming service, and (B) subscriber interaction, if any, which is required for the selection or use of such video programming or other programming service." 47 USC §521(6).

[10] The Cable Act does not define what a cable programmer is.

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Real liberty for all could not exist under the operation of a principle which recognizes the right of each individual person to use his own, whether in respect of his person or his property, regardless of the injury that may be done to others.

Id. at 26; *see also O'Connor v. Donaldson*, 422 U.S. 563, 582-83 (1975) ("There can be little doubt that in the exercise of its police power a State may confine individuals solely to protect society from the dangers of significant antisocial acts or communicable disease.").

C. FOX HAS VIOLATED THE WASHINGTON CONSUMER PROTECTION ACT

Washington's Consumer Protection Act, RCW 19.86 (CPA), may be enforced either by the state or a citizen. RCW 19.86.090. The purpose of the CPA is to "complement the body of federal law governing restraints of trade, unfair competition and unfair, deceptive and fraudulent acts and practices in order to protect the public and foster fair and honest competition." RCW 19.86.020. The CPA is liberally construed so that its beneficial interest may be served. RCW 19.86.920.

To prevail in a private CPA claim, the plaintiff must prove (1) an unfair or deceptive act or practice, (2) occurring in trade or commerce, (3) affecting the public interest, (4) injury to a person's business or property, and (5) causation.

Panag v. Farmers Ins. Co., 166 Wn.2d 27, 37, 204 P.3d 885 (2009). An action under the CPA does not require privity of contract. *Holiday Resort Cmty. Ass'n v. Echo Lake Assoc., LLC,* 134 Wn. App. 210, 219, 135 P.3d 499 (2006).

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1. Cable television is subject to consumer protection laws

The Cable Act specifically states that state consumer protection laws are not wholesale pre-empted by it and may be enforced. 47 USC §552(d)(1).[11] Billing practices are the only area which pre-empt state consumer protection acts. 47 USC §543(a)(1);[12] *Time Warner Cable v. Doyle*, 66 F.3d 867 (7th Cir. 1994) (upholding a Wisconsin consumer protection statute-- §100.20--relating to unfair trade practices as not preempted by the Cable Act). In Washington, a private right of action exists under the CPA. RCW 19.86.090 and .093.

2. WASHLITE has standing to bring the action on behalf of its members

Fox argues that WASHLITE may not bring a claim under the CPA on behalf of its members citing to *Satomi Owners Ass'n v. Satomi*, *LLC*, 139 Wn. App. 175, 181, 159 P.3d 460 (2007), *overruled on other grounds at* 167 Wn.2d 781 (2009), *citing Hangman Ridge Training Stables v. Safeco Title Ins. Co.,* 105 Wn.2d 778, 719 P.2d 531 (1986). While the Amended Complaint identifies Jane and John Does 1-1000 and thus individual plaintiffs are identified, the law has changed on whether organizations may represent their members since *Satomi* and *Hangman* were decided.

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[11] The provision provides: "Consumer protection laws. Nothing in this title shall be construed to prohibit any State or any franchising authority from enacting or enforcing any consumer protection law, to the extent not specifically preempted by this title."

[12] The provision provides: "In general. No Federal agency or State may regulate the rates for the provision of cable service except to the extent provided under this section and section 612. Any franchising authority may regulate the rates for the provision of cable service, or any other communications service provided over a cable system to cable subscribers, but only to the extent provided under this section. No Federal agency, State, or franchising authority may regulate the rates for cable service of a cable system that is owned or operated by a local government or franchising authority within whose jurisdiction that cable system is located and that is the only cable system located within such jurisdiction."

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In *Riverview Cmty. Grp. v. Spencer & Livingston,* 181 Wn.2d 888, 337 P.3d 1076

(2014), the Washington Supreme Court held

> "Organizations have standing to assert the interests of their members, so long as
> members of the organization would otherwise have standing to sue, the purpose
> of the organization is germane to the issue, and neither the claim nor the relief
> requires the participation of individual members." *Five Corners Family Farmers
> v. State*, 173 Wn.2d 296, 304, 268 P.3d 892 (2011) (citing *Int'l Ass'n of
> Firefighters, Local 1789 v. Spokane Airports*, 146 Wn.2d 207, 213-14, 45 P.3d
> 186, 50 P.3d 618 (2002) (*Firefighters*)).

181 Wn. 2d at 894. As is shown by the declarations filed contemporaneously with this brief,

members of WASHLITE have standing to sue under the CPA. First, they all declare they, as

cable television consumers, have been damaged by Fox's deceptive acts. Second, WASHLITE

was formed with the intention of protecting the various members interest relating to matters of

public interest litigation such as the instant case. Third, relative to the relief requested,

injunctive relief against Fox under the CPA does not require the members participation.

Relative to damages, it has long been the rule in Washington State, that a "consumer need not

show specific monetary damages to recover under the" CPA. *E.g. St. Paul Fire & Marine Ins.

Co. v. Updegrave,* 33 Wn. App. 653, 656 P.2d 1130 (1983). Thus, participation of the

individual members of WASHLITE is not necessary for this result either. In short, WASHLITE

is a proper party to this action and has standing to bring it.

> **3.   Fox has deceived consumers in Washington State in a number of
> ways**

The Consumer Protection Act also does not define the term "deceptive," but the

Washington Supreme Court has declared that "[d]eception exists 'if there is a representation,

omission or practice that is likely to mislead' a reasonable consumer." *Panag*, 166 Wn.2d at 50.

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To establish the deceptive element of a CPA claim, "a plaintiff need not show that the act in question was intended to deceive, but that the alleged act had the capacity to deceive a substantial portion of the public." *Hangman Ridge*, 105 Wn.2d at 785. Because "the purpose of the capacity-to-deceive test is to deter deceptive conduct *before* injury occurs," the statute's reach extends to the deterrence of deceptive conduct that aggravates and prolongs an existing and ongoing injury such as declaring an international and national health emergency a "hoax." *Id.*

> A claimant need not prove reliance or deceptive misrepresentation but only that the actions have a tendency or capacity to deceive a substantial portion of the public.

Tallmadge v. Aurora Chrysler Plymouth, 25 Wn. App. 90, 93, 605 P.2d 1275 (1979).

a.   COVID-19 is a serious and lethal threat to human life

There can be no intelligent debate that COVID-19 is a serious and lethal threat to human life. According to the Centers for Disease Control and Prevention, as of Monday, May 11, 2020, 49,867 persons in the United States have died in the period beginning in early February, 2020[13] from COVID-19.[14] An additional 21,974 have died from a combination of pneumonia and COVID-19.[15] In January 2020, both the World Health Organization (WHO), the Federal Government through Secretary Azar declared health emergencies. *Amended Complaint,* ¶4.25 & 4.26. On February 29, 2020, Governor Inslee declared a statewide

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[13] University of Minnesota Center for Infectious Disease & Policy: https://www.cidrap.umn.edu/news-perspective/2020/04/coroner-first-us-covid-19-death-occurred-early-february

[14] Centers for Disease Control & Prevention, https://www.cdc.gov/nchs/nvss/vsrr/COVID19/

[15] *Id.*

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emergency. *Amended Complaint,* ¶4.45.2. In late February 2020, Microsoft and Amazon, two of Washington State's largest employers, directed that their employees work at home because of the threat posed by COVID-19. Despite all this and other readily available information from reliable sources both governmental and private, Fox started its campaign of deceiving Washington consumers by repeatedly stating that COVID-19 was a hoax.

b. Fox deceives Washington consumers by disclaiming that it is a "news" source

The two television channels cited in this case, Fox News Network and Fox Business, are both cable television channels operated by Fox News Network LLC (FNN). A variety of chyrons[16] are used on both channels during broadcasting hours (both channels are on the air 24 hours a day, seven days a week) which include an image with the text "Fox News" rotating through as follows:

This chyron appears in all programming on Fox News and Fox Business. In at least one other forum however, consisting of a variety of websites used by FNN where the broadcasts from Fox News and Fox Business are made available, it represents that its services are "for your personal enjoyment[17] and entertainment"[18] and makes no mention that it is a news

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[16] A chyron is "a caption superimposed over usually the lower part of a video image." MERRIAM WEBSTER ONLINE, https://www.merriam-webster.com/dictionary/chyron
[17] The term "enjoyment" is defined as "something that gives keen satisfaction." MERRIAM WEBSTER ONLINE, https://www.merriam-webster.com/dictionary/enjoyment.

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source.[19] In this case, Fox claims the protections afforded to a known and authentic news source such as the Washington Post but limits itself as an entertainment source thus disclaiming that it is a news source. Fox's own words condemn it claims. ER 801(d)(2). And because it disclaims itself as a news source, Fox is not entitled to the protection of a newspaper. *Cf. Fidelity Mort. Corp. v. Seattle Times Co.*, 131 Wn. App. 462, 128 P.3d 621 (2005).

By disclaiming that it is a "news" source, Fox is deceiving consumers in Washington State. Neither Fox News or Fox Business distinguishes between news as authentic information and news as entertainment/enjoyment, thus conveying that all statements broadcast on its channels are authentic.

> With the existence of a truth, with physical facts per se, neither plaintiff nor defendant is concerned; for them facts in that absolute sense are but as ore in a mountain or fish in the sea -- valueless unless and until by labor mined or caught for use. Nor are facts, even after ascertainment, news, unless they have that indefinable quality of interest, which attracts public attention. Neither is news always synonymous with facts, in the sense of verity; indeed, much news ultimately proves fictitious, yet it is excellent news notwithstanding. **The word [news means] no more (laying aside hoaxing and intentional falsehood) than apparently authentic reports of current events of interest.**

Associated Press v. Int'l News Serv., 245 F. 244, 248 (2d Cir. 1917), *affirmed,* 248 U.S. 215 (1918) (Emphasis added).

Even news as entertainment/enjoyment has a basis in authenticity. An example of this is sports reporting. Consumers of sports news are, as one example, not only informed by learning that their favorite collegiate football player has been drafted to an NFL team, such information

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[18] The term "entertainment" is defined as "amusement or diversion provided especially by performers." MERRIAM WEBSTER ONLINE, https://www.merriam-webster.com/dictionary/entertainment.

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is necessarily authentic where facts result in entertainment and enjoyment in addition to conveying knowledge. *E.g.* M. Vorel, *Former UW Huskies C Nick Harris selected by Cleveland Browns in fifth round of NFL Draft,* SEATTLE TIMES (April 25, 2020).[20]

In the acts complained of in this action, various television personalities speaking on Fox News and Fox Business stated that COVID-19 was (and is) a hoax, thus stating, as a matter of fact, that COVID-19, and the threat imposed by it, was non-existent.[21] It did so after the WHO, the Federal Government and Washington State all declared a health emergency as a direct result of the spread of COVID-19. It does all of this solely as an entertainment source by its own admission. And frankly, there can be no entertainment or enjoyment by a viewer who is exposed to a patent falsehood, particularly on an issue of such grave importance. Stating that COVID-19 is a hoax does not constitute "news" as a matter of law but, rather, is a patent and intentional falsehood as "news" necessarily implies authenticity.

c.   **The existence of COVID-19 and its lethality is not a political issue**

Fox bitterly complains that WASHLITE is attempting to restrict its First Amendment rights on the cable medium by characterizing the existence of COVID-19 as a deadly plague as a political issue. Fox conflates the existence of the virus as a threat to human life with a

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[19] See www.foxnews.com, Terms of Use found at this link: https://www.foxnews.com/terms-of-use

[20] The story is found at this link: https://www.seattletimes.com/sports/uw-husky-football/former-uw-huskies-c-nick-harris-selected-by-cleveland-browns-in-fifth-round-of-nfl-draft/

[21] The term "hoax" is defined as: **"**to trick into believing or accepting as genuine something false and often preposterous." MERRIAM WEBSTER ONLINE, https://www.merriam-webster.com/dictionary/hoax

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discussion on the appropriate response to it. The former is a fact, not an idea. The latter involves a discussion of ideas. This is a critical difference.

> While we recognize that a precise definition of that elusive term "political issue" is at best a semantic improbability and that the term is best described by example rather than by sweeping generalizations, there are enough consistently recurring characteristics to render the term definable. These are best summarized by Mr. Justice Brennan in *Baker v. Carr*, 369 U.S. 186, 217, 82 S. Ct. 691, 7 L. Ed. 2d 663 (1962):
>
>> It is apparent that several formulations which vary slightly according to the settings in which the questions arise may describe a political question, although each has one or more elements which identify it as essentially a function of the separation of powers. Prominent on the surface of any case held to involve a political question is found a textually demonstrable constitutional commitment of the issue to a coordinate political department; or a lack of judicially discoverable and manageable standards for resolving it; or the impossibility of deciding without an initial policy determination of a kind clearly for nonjudicial discretion; or the impossibility of a court's undertaking independent resolution without expressing lack of the respect due coordinate branches of government; or an unusual need for unquestioning adherence to a political decision already made; or the potentiality of embarrassment from multifarious pronouncements by various departments on one question.

Buchanan v. Rhodes, 249 F. Supp. 860, 863-64 (N.D. Ohio 1966). Under this standard, the existence of COVID-19 as a grave threat to human life does not involve any of these elements and thus, is not a political issue. While the response to the threat involves governmental actors, the necessary governmental response does not create a political issue here.

4. Fox's statements denying the lethality of COVID-19 are also unfair under the CPA as immoral and unethical

In determining whether an act is unfair under the CPA, the court considers the following:

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> "(1) whether the practice, without necessarily having been previously considered unlawful, offends public policy as it has been established by statutes, the common law, or otherwise -- whether, in other words, it is within at least the penumbra of some common-law, statutory, or other established concept of unfairness; (2) whether it is immoral, unethical, oppressive, or unscrupulous; (3) whether it causes substantial injury to consumers (or competitors or other businessmen)." *FTC v. Sperry & Hutchinson Co.*, 405 U.S. 233, 244 n.5, 31 L. Ed. 2d 170, 92 S. Ct. 898, 905 (1972).

Magney v. Lincoln Mut. Sav. Bank, 34 Wn. App. 45, 57, 659 P.2d 537 (1983).

Claiming that something as lethal as COVID-19 is nothing but a hoax certainly qualifies as unfair, in addition to being deceptive, under these standards. At a minimum, such statements are immoral and unethical given the immediate and grave threat to human life that COVID-19 is. Moreover significant public policy issues are at stake.

D. FOX DOES BUSINESS IN WASHINGTON STATE—IT MAINTAINS ITS OFFICE IN BELLTOWN

The CPA also provides that a defendant be engaged in trade or commerce in Washington State. RCW 19.86.020. In addition to providing cable television programming in Washington State, Fox, through FNN, maintains a physical presence in Downtown Seattle, with its principle place of business in the state located in Belltown. *Amended Complaint, ¶*1.5. It is further registered with the Washington Secretary of State's office as a foreign corporation doing business in the state. *Amended Complaint, ¶*1.3.[22]

Fox engages in substantial and pervasive commercial activity to the extent that its cable television content cannot be divorced from the broad definition of commerce within the meaning of the CPA. "Fox Corporation produces and distributes compelling news, sports and

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entertainment content through its iconic domestic brands including: FOX News Media, FOX Sports, FOX Entertainment, and FOX Television Stations."[23] Fox claims that not only do "[t]hese brands hold cultural significance with consumers" but they also have significant "commercial importance for distributors and advertisers." [24] According to its own statement, "[t]he breadth and depth of [its] footprint allows [Fox] to deliver content that engages and informs audiences, develop deeper consumer relationships and create more compelling product offerings."[25] Therefore, Fox cannot escape liability under the CPA by claiming that its conduct did not occur in trade or commerce. In the same breath as expressed in the Motion, Fox argues that its COVID-19 commentary is not commercial, while boasting about the commercial influence of its cable television channel coverage.

Although Washington courts have declined to endorse the position "that all reporting is inherently commercial," the opposite conclusion is just as problematic.[26] Categorically exempting non-print broadcast, cable and subscription entertainment "brand" distributors from the scope of the CPA would give a free pass to any corporate empire with a dominant market share (Fox distributes its "brand" to over 90% of Washington consumers) wishing to skirt consumer protection laws.

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[22] See also Washington Secretary of State
https://ccfs.sos.wa.gov/#/BusinessSearch/BusinessInformation
[23] These statements are found on a news release on the Fox Corporation's website:
https://www.foxcorporation.com/news/archives/2020/fox-corporation-completes-acquisition-of-seattle-duopoly-and-milwaukee-stations/
[24] *Id.*
[25] *Id.*
[26] This point is noted in *Delashaw v. Seattle Times Co.*, 2018 U.S. Dist. LEXIS 143675, an unpublished decision from the United States District Court for the Western District of Washington.

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Under this standard, even a traditional print news article may be "properly characterized as occurring in trade or commerce under the CPA," if it is sufficiently connected with business-related activity. *Fidelity,* 131 Wn. App. at 468-69 (a newspaper may be properly characterized as occurring in trade or commerce if a person paid the newspaper to be included in the article).

As a threshold matter, this element is satisfied as applied to Fox's misrepresentations because it is not traditional print media obtaining the bulk of its revenue from advertising. Rather, it is a corporation selling entertainment content, broadcasting, and maintaining subscription services to paying consumers to distribute its "brands" described above. As such, these "entrepreneurial aspects" of the Fox corporation places its conduct "within the 'trade or commerce' definition of the CPA" by default. *Short v. Demopolis*, 103 Wn.2d 52, 60-61, 691 P.2d 163 (1984).

This approach is consistent with Washington law, which holds that courts may ascertain the CPA's meaning through a '"gradual process of judicial inclusion and exclusion." *State v. Reader's Digest Ass'n,* 81 Wn.2d 259, 274, 501 P.2d 290 (1972) (citing *Federal Trade Comm'n v. Raladalm Co.,* 283 U.S. 643, 648, 51 S. Ct. 587, 75 L. Ed. 2d 1324 (1931)); *see also Ivan's Tire Serv., v. Goodyear Tire & Rubber Co.,* 10 Wn. App. 110, 123, 517 P.2d 229 (1973), *affirmed,* 86 Wn.2d 513 (1976) (when defining the bounds of the CPA, courts should consider the facts of each CPA case and "let the law develop on a case-by-case basis"). Whether the "commerce" at issue in a given case directly or indirectly affects the people of the State of Washington must be decided on the facts of that case. *See Thornell v. Seattle Serv. Bureau, Inc*., 184 Wn.2d 793, 800, 636 P.3d 587 (2015) (""In order to give effect to the phrase 'indirectly affecting,' claims are not limited to those having only a direct affect" on the people

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of Washington."). In this case, the facts as they appear now, and as they will be developed through discovery, demonstrate that Fox was (and is) involved in deceptive commerce negatively impacting consumers in Washington State.

E.   SPREADING MISINFORMATION ABOUT COVID-19 ADVERSELY AFFECTS THE PUBLIC INTEREST

Fox argues at page 18, footnote 6 of the Motion, that RCW 70.26, the Pandemic Influenza Preparedness Act (PIP), does not apply to Fox but only to public health officials and therefore cannot be the basis of a CPA clam. This is incorrect.

RCW 19.86.093 provides:

In a private action in which an unfair or deceptive act or practice is alleged under RCW 19.86.020, a claimant may establish that the act or practice is injurious to the public interest because it: …

(1)   Violates a statute that incorporates this chapter;

(2)   Violates a statute that contains a specific legislative declaration of public interest impact; or

(3)   (a) Injured other persons; (b) had the capacity to injure other persons; or (c) has the capacity to injure other persons.

As is shown below, the PIP clearly qualifies under RCW 19.86.093 as a basis for a private claim under the CPA.

1.   The PIP declares that accurate and authentic information about a pandemic is in the public interest

RCW 70.26.010 specifically identifies a broad public interest in an effective response to a pandemic influenza such as COVID-19. PIP also identifies how an effective response to such a plague:

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An effective response to pandemic influenza in Washington must focus at the local level and will depend on preestablished partnerships and collaborative planning on a range of best case and worst case scenarios. It will require flexibility and real-time decision making, guided by accurate information. It **will also depend on a well-informed public that understands the dangers of pandemic influenza and the steps necessary to prevent the spread of the disease.**

RCW 70.26.010(5). This is a clear and unambiguous statement of legislative intent.

In judicial interpretation of statutes, the first rule is "the court should assume that the legislature means exactly what it says. Plain words do not require construction." *Snohomish v. Joslin*, 9 Wn. App. 495, 498, 513 P.2d 293 (1973). This court will not construe unambiguous language. *Vita Food Prods., Inc. v. State*, 91 Wn.2d 132, 134, 587 P.2d 535 (1978).

Sidis v. Brodie/Dohrmann, Inc., 117 Wn.2d 325, 329, 815 P.2d 781 (1991), *citing King Cy. v.*

Taxpayers of King Cy., 104 Wn.2d 1, 5, 700 P.2d 1143 (1985).

There can be no clearer statement of a legislative declaration of public interest impact

than a well informed public that understands the dangers of pandemic influenza and the steps

necessary to prevent the spread of the disease is necessary to prevent the spread of the disease."

Any suggestion to the contrary is not credible. The direction to state and local agencies to take

action to develop plans to combat a pandemic influenza is based on the desire for an effective

response as identified in RCW 70.26.010(5), not independent of it.

> **2.   False statements regarding the lethality of COVID-19 has the capacity to injure Washington consumers**

RCW 19.86.093(3) provides that actions which injured other persons, had the capacity

to injure other persons, or has the capacity to injure other persons are also actionable under

CPA. As is shown herein, Fox's claim that COVID-19 is a hoax, and its continuing related

statements, certainly have injured persons, and had/has the capacity to injure persons.

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Recent scholarly research into the impact of misinformation proves this point. The

Becker Friedman Institute at the University of Chicago, in a study directly examining Fox's

misrepresentations on COVID-19, noted that "[e]fforts to contain a pandemic depend crucially

on citizens holding accurate beliefs"[27] and concluded that greater exposure to the falsehoods

broadcast by Mr. Hannity as one example were "associated with a greater number" of deaths.[28]

Additionally, the Harvard Kennedy School Misinformation Review, recently concluded:

> Public understanding of needed preventative measures and rejection of bogus
> ones is important because SARS-CoV-2 is highly contagious and potentially
> lethal (cdc.gov). Pollsters have identified partisan differences in views on
> SARS-CoV-2. In particular, a number of March 2020 polls showed that
> Republicans were less worried than were Democrats about exposure to the virus
> (Gallup 2020), less likely to consider the SARS-CoV-2 outbreak a major health
> threat (Pew 2020), and more likely to approve of President Donald Trump's
> handling of the "coronavirus pandemic" (Marist, 2020). Like this work, our
> early March data registered differences tied to partisanship in their concern
> about SARS-CoV-2, specifically that Republicans were less knowledgeable
> about the relative lethality of SARS-CoV-2. **In addition, our data suggested
> an association between exposure to some kinds of media, conservative and
> social media in particular, and being misinformed, associations that persist
> when partisanship is considered.** ...[29]

Therefore, even the possibility that Fox's coverage misled a portion of its viewership

demonstrates an unprecedented capacity to cause injury to the public, satisfying this element as

defined by the statute. The CPA provides, in relevant part that "a claimant may establish that

the act or practice *is injurious to the public interest* because it: … (a) Injured other persons; (b)

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[27] Leonardo Bursztyn, Aakaash Rao, Christopher Roth, and David Yanagizawa-Drott,
Misinformation During a Pandemic, Working Paper No. 2020-44, p. 1, BECKER FRIEDMAN INSTITUTE
FOR ECONOMICS AT THE UNIVERSITY OF CHICAGO (April 2020). Copy attached as Exhibit A.
[28] *Id. p. 2.*

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had the capacity to injure other persons; or (c) has the capacity to injure other persons." RCW 19.86.093. (Emphasis added). Fox's brand distribution reaches 90% of the households in Washington, firmly establishing its capacity to disseminate false information about the dangers of COVID-19 is injurious to the public interest as a matter of law. Additionally, this misinformation has contributed, at a minimum, to an increased reaction to COVID-19 as demonstrated by Governor Inslee's extensions of the "stay at home" order and the planned staged reopening of the State of Washington.[30] Consumers in Washington State are directly impacted by this more severe reaction to COVID-19.

F. WASHLITE MEMBERS AND WASHINGTON CONSUMERS HAVE BEEN INJURED BY FOX'S FALSE STATEMENTS

WASHLITE alleges at Paragraphs 5.6, of the Amended Complaint that its members have been injured by Fox's misrepresentations regarding the lethality of COVID-19. If the motion is made under CR 12, then that element of the claim has been met as such a statement is treated as true. *Parilla,* 138 Wn. App. 427, 431-432, 157 P.2d 879 (2007). If the motion is considered under CR 56, then the court should consider the declarations submitted with this response as evidence of the damages suffered by the members of WASHLITE. Under either standard, injury to Washington consumers is established.

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[29] Kathleen Hall Jamieson & Dolores Albarracin, *The Relation between Media Consumption and Misinformation at the Outset of the SARS-CoV-2 Pandemic in the US,* HARVARD KENNEDY SCHOOL MISINFORMATION REVIEW, Vol. 1 p. 2 (April 2020). Copy attached as Exhibit B.
[30] A selection of Governor Inslee's Proclamations are attached as Exhibit C.

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G. A CAUSAL LINK BETWEEN FOX'S FALSE STATEMENTS AND DAMAGE HAS ALREADY BEEN ESTABLISHED

Fox misstates the test for causation under the CPA. *Motion, p. 16.* Only some "causal link is required between the … deceptive acts and the injury suffered by the plaintiff," in order to satisfy this element. *Hangman Ridge*, 105 Wn.2d at 793. The requirement that "the defendant induced the plaintiff to act or refrain from acting" is a mislaid prong of the long-abandoned public interest analysis." *Hangman,* at 789-90. Although Washington courts have been a little slow on the uptake, 'inducement' has no bearing on the current test for causation. According to the relevant case law, "causation is a factual question for the jury," and the CPA relies on the much simpler 'but for' test to establish this element. *E.g. Indoor Billboard/Wash., Inc. v. Integra Telecom of Wash., Inc.,* 162 Wn.2d 59, 83, 170 P.3d 10 (2007).

This element is satisfied as there is a robust correlation between Fox viewers' consumption of misinformation about the dangers of COVID-19, and negative impacts on community-wide health outcomes, and economic impacts as the pandemic has continued to spread. *See Footnotes 27 and 29 above cited.* The economic impacts of the pandemic cannot be overstated as acknowledged by Kidder Mathews in its May 2020 publication on the impacts on commercial real estate as one example. *Copy attached as Exhibit D.*

Additionally, although many WASHLITE members pay for Fox cable channels content directly,[31] the CPA does not require that the person injured be the actual consumer of goods or

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[31] Washington consumers do not have the choice to "opt-out" of Fox channels or any other channel but only have the ability to choose a package of cable television channels. *Amended Complaint,* ¶4.10.

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services. *See Wash. State Physicians Ins. Exch. & Ass'n. v. Fisons Corp.*, 122 Wn.2d 299, 314, 858 P.2d. 1054 (1993).

Moreover, Fox's reliance on *Fidelity Mort. Corp. v. Seattle Times Co.*, 131 Wn. App. 462, 128 P.3d 621 (2005) is misplaced as it does not provide a blanket exclusion for newspapers from the CPA. In *Fidelity*, a mortgage rate chart published in the Seattle Times failed to satisfy this element because the causal chain was "too remote." Where unknown third-parties "*might* have been considering Fidelity for their residential loan, *might* have read the Times' chart, *might* have been misled by rate quotes that were not precise enough, and *might* have refrained from obtaining a Fidelity mortgage as a result," the causal link was insufficient. *Id*. at 469 (Emphasis added). Further, *Fidelity* makes no mention of an exception to the CPA for a cable programmer on a cable system owned by someone other that the cable programmer. *Fidelity* is distinguishable because the present case does not solely rely upon attenuated third-party conduct to establish a link between Fox's deception and plaintiffs' injury. Further, in light of the University of Chicago study and the Harvard study cited above, the causation in this case is not subject to reasonable dispute.

The Washington consumers who were deceived by Fox's misrepresentations are among the people suffering as a result. The fact that more people than those included in the complaint were induced to act as a result of Fox's deceptive conduct strengthens it in regard to the effects of causally related third-party actions and effects.

VI.   PROPOSED ORDER

A proposed form of order is attached hereto as Exhibit C.

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VII.   CONCLUSION

For the above stated reasons, the motion should be denied.

This response is 7,772 words consistent with the local rules.

Dated this 11th day of May, 2020.

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Exhibit A

Misinformation During a Pandemic

Leonardo Bursztyn, Aakaash Rao, Christopher Roth, and David Yanagizawa-Drott
APRIL 2020

Becker Friedman Institute

FOR ECONOMICS AT **UCHICAGO**

Misinformation During a Pandemic[*]

Leonardo Bursztyn[†]
Aakaash Rao[‡]
Christopher Roth[§]
David Yanagizawa-Drott[¶]

First version: April 19, 2020

We will update estimates on cases and deaths periodically as new data becomes available.

Abstract

We study the effects of news coverage of the novel coronavirus by the two most widely-viewed cable news shows in the United States — *Hannity* and *Tucker Carlson Tonight*, both on Fox News — on viewers' behavior and downstream health outcomes. Carlson warned viewers about the threat posed by the coronavirus from early February, while Hannity originally dismissed the risks associated with the virus before gradually adjusting his position starting late February. We first validate these differences in content with independent coding of show transcripts. In line with the differences in content, we present novel survey evidence that Hannity's viewers changed behavior in response to the virus later than other Fox News viewers, while Carlson's viewers changed behavior earlier. We then turn to the effects on the pandemic itself, examining health outcomes across counties. First, we document that greater viewership of *Hannity* relative to *Tucker Carlson Tonight* is strongly associated with a greater number of COVID-19 cases and deaths in the early stages of the pandemic. The relationship is stable across an expansive set of robustness tests. To better identify the effect of differential viewership of the two shows, we employ a novel instrumental variable strategy exploiting variation in when shows are broadcast in relation to local sunset times. These estimates also show that greater exposure to *Hannity* relative to *Tucker Carlson Tonight* is associated with a greater number of county-level cases and deaths. Furthermore, the results suggest that in mid-March, after Hannity's shift in tone, the diverging trajectories on COVID-19 cases begin to revert. We provide additional evidence consistent with misinformation being an important mechanism driving the effects in the data. While our findings cannot yet speak to long-term effects, they indicate that provision of misinformation in the early stages of a pandemic can have important consequences for how a disease ultimately affects the population.

JEL Codes: D1, I31, Z13.
Keywords: Media, Health, Coronavirus

1   Introduction

Efforts to contain a pandemic depend crucially on citizens holding accurate beliefs. Yet the spread of the novel coronavirus (COVID-19) in 2020 was accompanied by the spread of news downplaying the extent of the threat and dismissing the importance of measures designed to contain the epidemic. In particular, Fox News, the most-watched cable network in the United States, has faced widespread criticism for spreading misinformation about the pandemic.[1] If true, this could be of particular concern, not only due to Fox's large viewer base but also because its viewers are disproportionately elderly — a population among whom the coronavirus may be up to ten times more fatal than among the general population (Wu et al., 2020). Moreover, given the large externalities inherent in a pandemic, misinformation may have harmful effects far beyond those on viewers themselves by affecting disease transmission trajectories in the broader population.

At the onset of the pandemic, Fox News evening shows differed in the extent to which they portrayed the coronavirus as a serious threat to the United States. This was particularly true for the network's two most popular shows (which are also the two most widely-viewed cable news shows in the United States) — *Hannity* and *Tucker Carlson Tonight*. Before the coronavirus began to spread in January 2020, *Hannity* and *Tucker Carlson Tonight* were relatively similar in content and viewership: both covered the news from a conservative perspective and were broadly supportive of President Trump's policy agenda. Yet as we document using qualitative evidence, text-analysis methods, and human coding of the shows' scripts, the two shows diverged sharply as the coronavirus began to spread beyond China. Carlson warned viewers that the coronavirus might pose a serious threat from early February, while Hannity first ignored the topic on his show and then dismissed the risks associated with the virus, claiming that it was less concerning than the common flu and insisting that Democrats were using it as a political weapon to undermine the president. We also show that Hannity began to moderate his tone in late February and early March, and that the two shows had largely converged in their coverage of the coronavirus by mid-March.

In this paper, we study how differential exposure to these two shows affected behavior and downstream health outcomes. To examine the relationship between viewership of *Hannity* and *Tucker Carlson Tonight* and changes in behavior in response to the coronavirus — e.g. washing hands more often, practicing social distancing, cancelling travel plans, etc. — we fielded a survey to 1,045 Fox News viewers aged 55 or older in early April 2020. In line with the differences in content, we find that Hannity's viewers on average changed their behavior in response to the coronavirus five days later than other Fox News viewers, while Carlson's viewers changed behavior three days earlier than other Fox News viewers. Given the critical importance of early preventative measures (Bootsma and Ferguson, 2007; Markel et al., 2007) this difference in the timing of changes in cautious behaviors may have significant consequences for health outcomes.

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[1]See, for example, "Fox News has succeeded – in misinforming millions of Americans." *The Washington Post*, April 1, 2020; "Fox's Fake News Contagion." *The New York Times*, March 31, 2020. Relatedly, a group of over seventy journalism professors wrote an open letter highlighting the danger of misinformation spread by Fox News: "Rupert Murdoch, Fox News' Covid-19 misinformation is a danger to public health," *The Guardian*, April 9, 2020. Fox News is currently being sued by the Washington League for Transparency and Ethics, which alleges that the network intentionally misled people about the threat posed by the coronavirus and thus facilitated its spread.

We then turn to the effects on the pandemic, examining disease trajectories across counties. We first show that, controlling for a rich set of county-level demographics (including the local market share of Fox News), greater local viewership of *Hannity* relative to *Tucker Carlson Tonight* is associated with a greater number of COVID-19 cases starting in early March and a greater number of deaths resulting from COVID-19 starting in mid-March.[2] In a set of permutation tests across socio-economic, demographic, political, and health-related covariates, as well as across geographical fixed effects to account for unobservable factors, we show that the established relationship is highly robust. Indeed, the estimated effects of exposure become stronger as we control for more factors.

Even so, areas where people prefer Hannity over Carlson might differ on a number of unobservable dimensions that could independently affect the spread of the virus. Thus, to identify our effect of interest, we employ an instrumental variable approach that shifts relative viewership of the two shows, yet is plausibly orthogonal to local preferences for the two shows and to any other county-level characteristics that might affect the virus' spread. In particular, we predict this difference in viewership using the product of i) the predicted fraction of TVs on during the start time of *Hannity* (leaving out Fox News) and ii) the local market share of Fox News from 2018, leaving out *Hannity* and *Tucker Carlson Tonight*. To generate cleaner variation in the first term of the interaction, we exploit cross-county variation in local sunset times, which predicts the likelihood that people turn their TV on at different points in the evening. The idea is simple: if people like to turn on their TVs to watch *something* when *Hannity* happens to be on instead of *Tucker Carlson Tonight*, the likelihood that viewers are shifted to watch Hannity is disproportionately large in areas where Fox News is popular in general. We show that, conditional on a minimal set of controls, the interaction term is uncorrelated with any among a larger number of variables that might independently affect the local spread of the coronavirus. We then show it strongly predicts viewership in the hypothesized direction. Using this instrument, we confirm the OLS findings that greater exposure to *Hannity* relative to *Tucker Carlson Tonight* leads to a greater number of COVID-19 cases and deaths. Our results indicate that a one standard deviation increase in relative viewership of Hannity relative to Carlson is associated with approximately 30 percent more COVID-19 cases on March 14, and 21 percent more COVID-19 deaths on March 28. Consistent with the gradual convergence in scripts between the two shows beginning in late February, the effects on cases decline from mid-March onwards. A second instrumental variables approach in the spirit of a shift-share instrument yields qualitatively identical and quantitatively similar conclusions.[3]

The timing of the estimated effects suggests a potentially important role of the informational content of the two shows in explaining health outcomes. As we document below, we construct a day-by-day index quantifying differential coverage of the pandemic on *Tucker Carlson Tonight* and *Hannity*. We show that the pattern of the effects of differential viewership of the two shows on COVID-19 cases mirrors the pattern of the pandemic coverage gap between the shows with a lag of just under one month. The pattern of the effects on deaths follows with an additional two week lag. The timing of effects is thus inconsistent with

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[2]We use viewership data from Nielsen aggregated at the Designated Market Area (DMA) level. We use the most recent data available for all DMAs, covering the month of January 2020. Our measure of viewership therefore does not capture potential endogenous viewership changes in response to the content in February 2020. It instead captures a pre-existing stock of "regular viewers" in the previous month.

[3]In our main analysis, we consider the effects of viewership of *Hannity* relative to *Tucker Carlson Tonight*, leaving aside effects potentially stemming from other evening shows on Fox News. Our 2SLS estimates use differential viewership of these two shows as the endogenous variable – implying a strong assumption that the instrument is not shifting viewership of any of the other shows. In Section 6, we generalize our analysis to *all* Fox New evening shows and provide evidence that our instrument shifts exposure to misinformation more generally (on Fox News), and that this has effects on cases and deaths.

alternative potential drivers of the patterns in our data, such as time-invariant unobservables correlated with our instrument and differential effects of exposure to the shows that are unrelated to their reporting about the novel coronavirus. Instead, these findings indicate that the documented effects on health outcomes are driven by the differences in how the two shows covered the pandemic during its onset period.

We shed more light on the role of this mechanism by combining detailed information on local viewership shares of different Fox News shows with a measure of how seriously each show portrayed the threat of the coronavirus on each day, based on independent coding of episode scripts. We show that our instrumental variable for the relative viewership between *Hannity* and *Tucker Carlson Tonight* strongly increases predicted exposure to coverage downplaying the threat of the virus, as measured by our index. We also show that our index strongly predicts the number of cases and deaths throughout March and early April 2020.

It is important to note that our findings do not speak to the overall effect on the total cases and death toll associated with the coronavirus in the U.S. We provide evidence that greater exposure to *Hannity* relative to *Tucker Carlson Tonight* increased cases and deaths throughout March and early April. However, it is possible that these effects will fade — and even possibly flip — over time. For example, greater relative exposure to *Hannity* may have simply shifted the timing of infections that would have eventually occurred when the virus became more widespread. Moreover, we cannot account for spillovers: on the one hand, riskier behavior by individuals in one area expose other people (in the same area and in other areas) to the virus; on the other hand, higher numbers of early deaths in one area might make the pandemic more salient and lead to more cautious behavior by other individuals in the area. Still, our findings suggest that a significant number of people died due to exposure to misinformation.

Our work contributes to a literature on the effects of media and propaganda on political behavior and health outcomes (La Ferrara, 2016; Banerjee et al., 2019a; DellaVigna and La Ferrara, 2015; La Ferrara et al., 2012; Bursztyn et al., 2019; Jensen and Oster, 2009; Chiang and Knight, 2011). Previous work has shown that media exposure can increase hate crimes (Müller and Schwarz, 2018; Bursztyn et al., 2019) and mass killings (Yanagizawa-Drott, 2014); it can also affect health outcomes, such as domestic violence (Card and Dahl, 2011; Banerjee et al., 2019b) and fertility choices (La Ferrara et al., 2012; Kearney and Levine, 2015). More closely related to our paper, prior work has highlighted that Fox news causally affects voting choices (DellaVigna and Kaplan, 2007; Martin and Yurukoglu, 2017) and judicial outcomes (Ash and Poyker, 2019). Our identification strategy also relates to a literature on *inattention* to particular news events: crowd-out of news space from events such as the Olympic Games affects government actions, such as responses to natural disasters (Eisensee and Strömberg, 2007) and bombing enemy countries (Durante and Zhuravskaya, 2018).

We also build upon a growing literature on the impact of identity and political polarization on behavior (Gentzkow, 2016; Iyengar et al., 2019; Campante et al., 2020). Long et al. (2019) show that higher county-level Trump vote shares are associated with lower hurricane evacuation rates after conservative media sources began to challenge the validity of hurricane advisories. Related to our study is contemporaneous work studying the correlation between local political ideology and the response to the coronavirus. Barrios and Hochberg (2020) find that areas with a higher Republican vote share perceived lower risk from the coronavirus, as measured by internet searches, and practiced less social distancing, as measured by cellphone data. Similarly, Allcott et al. (2020) use surveys and cellphone based measures of social distancing to study partisan differences in Americans' response to the coronavirus pandemic. Using the same GPS dataset, Andersen (2020) and Wright et al. (2020) find that more Republican counties and counties that watch greater

amounts of Fox News and counties in which Fox News is available practiced less social distancing. Adolph et al. (2020) show that both governors from states with more Trump supporters and Republican governors were slower to implement social distancing policies such as stay-at-home orders and school and business closures. We provide the first evidence on the causal effects of misinformation on health outcomes during a pandemic — COVID-19 cases and deaths.

We also contribute to a literature on the determinants and economic consequences of pandemics. Christensen et al. (2020) study health care delivery during the ebola crisis. Adda (2016) studies how economic activity affects the spread of viral diseases and assesses the effectiveness of social distancing measures. Correia et al. (2020) show that social distancing measures are causally related to better long-run economic outcomes in the context of the 1918 flu pandemic. More generally, we also relate to the broad literature on perceptions of health risks (Fortson, 2011; Oster et al., 2013; Kerwin, 2018; Fetzer et al., 2020; Dupas et al., 2018). Kerwin (2018) studies how information about HIV prevalence affects health behaviors. Oster et al. (2013) studies the role of expectations in shaping medical testing in the context of Huntington disease.

The remainder of this paper proceeds as follows. In Section 2, we provide a brief overview of media coverage of the coronavirus, with a particular focus on the differences in coverage between *Hannity* and *Tucker Carlson Tonight*. In Section 3, we present our survey results relating viewership of different Fox News shows to behavioral change in response to coronavirus. In Section 4, we describe our primary datasets. In Section 5, we present results on health outcomes, starting from OLS regressions and moving to our instrumental variable approach. In Section 6, we provide evidence on mechanisms by combining information from the scripts of the shows with local viewership shares. Section 7 concludes.

2 Setting

2.1 The coronavirus pandemic in the US

The rapid spread of the novel coronavirus (Zhu et al., 2020; Li et al., 2020) has fundamentally disrupted the modern world. The first confirmed case in the United States was reported on January 21, 2020 (Holshue et al., 2020). A few days later, the World Health Organization declared a global public-health emergency.[4] Throughout most of February, there remained uncertainty about the extent of the coronavirus outbreak and the threat it posed; on February 25, the CDC warned the US public that the virus was likely to spread rapidly in the United States (Jernigan, 2020). On March 11, the WHO declared the novel coronavirus outbreak a pandemic; two days later, President Donald Trump declared a national emergency (Cucinotta and Vanelli, 2020). By late March, the US had 186,082 cases, the highest number of confirmed COVID-19 cases in the world, and 3,806 coronavirus-related deaths (Dong et al., 2020). As of April 7, 95 percent of the US population were under stay-at-home orders banning them from leaving their places of residence for all but "essential reasons".[5]

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[4] "Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)." *World Health Organization*, January 30, 2020.

[5] "Coronavirus: These US states refuse to issue stay-at-home orders." *Al Jazeera*, April 15, 2020.

2.2 Media coverage of the novel coronavirus on Fox News

Fox News is the most watched cable network in the United States, with an average of 3.4 million total primetime viewers in the first quarter of 2020, compared to 1.9 million for MSNBC and 1.4 million for CNN (the other two of the "Big Three" US cable news networks).[6] Moreover, the median age of Fox News viewers is 68, substantially higher than that of CNN and MSNBC viewers (Pew, 2012). Both due to its reach and the fact that over half of its audience is over the age of 65 — a group that the CDC warns is at elevated risk from the coronavirus — Fox News may exert substantial influence on COVID-19 outcomes. This is particularly true given that the elderly both watch more TV in general than the average US citizen and because they disproportionately rely on television for news and information (Martin and Yurukoglu, 2017).

Primetime shows on Fox News   There are seven different news shows on Fox News running between 5pm and 11pm across the four major time zones in the continental US: *The Five* (5pm-6pm ET); *Special Report with Bret Baier* (6pm-7pm ET); *The Story with Martha MacCallum* (7pm-8pm ET); *Tucker Carlson Tonight* (8pm-9pm ET); *Hannity* (9pm-10pm ET); *The Ingraham Angle* (10pm-11pm ET); and *Fox News at Night* (11pm-12pm ET). Most of our paper focuses on the two most widely-viewed news shows on Fox News — indeed, in the United States: *Hannity* and *Tucker Carlson Tonight* — with an average of 4.2 million and 4 million daily viewers in the first quarter of 2020, respectively. Before the coronavirus began to spread in January 2020, *Hannity* and *Tucker Carlson Tonight* were relatively similar in content and viewership: both covered the news from a conservative perspective and were broadly supportive of President Trump's policy agenda. Yet as we document using qualitative evidence, text-analysis methods, and human coding of the shows' scripts, the two shows differed sharply in coverage of the coronavirus.

Qualitative evidence: Carlson vs. Hannity   Several reputable media outlets have criticized Fox News' coverage of the novel coronavirus, claiming that the network, and in particular Sean Hannity misled viewers about the dangers the virus posed.[7] Tucker Carlson, however, stood out as an outlier on Fox News for his insistence as early as early February that the coronavirus posed a serious threat to the United States.[8] Qualitative evidence suggests that *Tucker Carlson Tonight* and *Hannity* differed dramatically in their coverage of the coronavirus, standing out from other Fox shows and particularly from one another. For example, on January 28 — more than a month before the first coronavirus-related death in the US — Tucker Carlson spent a large portion of his show discussing the subject:

> All of a sudden the Chinese coronavirus is looking like a real threat, that could be a global epidemic or even a pandemic. It's impossible to know. But, it's the kind of thing that could be very serious – very serious.

On February 5, Carlson emphasized the large death toll due to COVID-19 in China and the emergence of COVID-19 cases in the US:

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[6]"Fox News Channel ratings for first quarter of 2020 are the highest in network history." *Fox News*, March 31, 2020.

[7]See, for example, "Fox News has succeeded – in misinforming millions of Americans." *The Washington Post*, April 1, 2020; "Fox's Fake News Contagion." *The New York Times*, March 31, 2020. Moreover, a group of over 70 journalism professors have signed an open letter highlighting the danger of misinformation spread by Fox News: "Rupert Murdoch, Fox News' Covid-19 misinformation is a danger to public health." *The Guardian*, April 9, 2020.

[8]See, for example, "His colleagues at Fox News called coronavirus a 'hoax' and 'scam.' Why Tucker Carlson saw it differently." *The LA Times*, March 23.

The Chinese coronavirus continues to spread tonight. The death toll now exceeding 500, that's the official number. In the United States, there are now 12 confirmed cases of it. Meanwhile, alarming videos trickling out of China indicate the virus is far from under control.

On February 25, Carlson warned his viewers about the deadly consequences of the coronavirus:

Currently, the coronavirus appears to kill about two percent of the people who have it. So let's be generous for a moment and imagine that asymptomatic carriers are not detected and the real death rate is only say half a percent — that would be one quarter of the current estimates. Even under that scenario, there would still be 27 million deaths from coronavirus globally. In this country, more than a million would die.

In contrast, Hannity covered the coronavirus and its consequences substantially less than Carlson and other Fox shows — particularly in February, when the virus was first beginning to spread in the United States. Even after he began discussing it more prominently in February, he downplayed the threat the virus posed. For example, in his show on February 27, Hannity stated:

And today, thankfully, zero people in the United States of America have died from the coronavirus. Zero. Now, let's put this in perspective. In 2017, 61,000 people in this country died from influenza, the flu. Common flu. Around 100 people die every single day from car wrecks.

In his show on March 2, Hannity strongly emphasized that Democrats were politicizing the virus, claiming that "[Democrats] are now using the natural fear of a virus as a political weapon. And we have all the evidence to prove it, a shameful politicizing, weaponizing of, yes, the coronavirus." While he began in early March to discuss the mortality statistics in more detail, he continued to emphasize that the virus still posed a relatively minor threat to US citizens. For example, on March 10, Hannity stated:

So far in the United States, there has been around 30 deaths, most of which came from one nursing home in the state of Washington. Healthy people, generally, 99 percent recover very fast, even if they contract it. Twenty six people were shot in Chicago alone over the weekend. You notice there's no widespread hysteria about violence in Chicago.

By mid-March, after President Trump declared a national emergency in response to the coronavirus, Hannity's coverage had converged to that of Carlson and other Fox News shows, emphasizing the seriousness of the situation and broadcasting CDC guidelines:

If you feel sick, stay at home. If your kids feel sick, don't send them to school or day care. If someone in your household has tested positive for coronavirus, please self-quarantine your entire household. Keep them at home. If you are an older person or an individual with underlying medical conditions, a compromised immune system, maybe you are receiving chemotherapy, radiation, have autoimmune issues, whatever the underlying diseases are, please stay away, almost quarantine yourself from other people.

Taken together, the qualitative evidence highlights that (i) Carlson warned his viewers early on about the potential threat posed by the coronavirus; and (ii) Hannity did not cover the coronavirus throughout most

of February, and he downplayed its seriousness until as late as mid-March. To more systematically evaluate differences in the extensive margin of coverage between primetime Fox News shows, we turn to a simple word-counting procedure.

Word counts: Carlson vs. Hannity   For each of the seven shows on Fox News airing between 5pm and 11pm local time across the four major time zones, we download episode transcripts from LexisNexis. We count the number of times any of a small list of coronavirus-related terms are mentioned on each day and plot the results in Panel A of Figure 1.[9] In particular, the y-axis of the panel displays the log of one plus the word count on each day.

Compared to the other three primetime shows, both Hannity and Carlson stand out. Both anchors first discussed the coronavirus in late January when the first US case was reported, but Carlson continued to discuss the subject extensively throughout February while Hannity did not again mention it on his show until the end of the month. The other three shows fell somewhere between these two extremes. By early March, the word counts of all shows had converged.

However, this simple procedure does not entirely capture differences in how shows discussed the coronavirus. The qualitative evidence above suggests that while Hannity discussed the coronavirus as frequently as Carlson during early March, he downplayed its seriousness and accused Democrats of using it as a partisan tool to undermine the administration. To capture these differences in the intensive margin of coverage, we turn to human coding of the scripts.

Mechanical Turk script validation   Between April 2 and April 6, we recruited workers on Amazon Mechanical Turk to assess how seriously each of the seven shows portrayed the threat of the coronavirus between early February and mid-March. For each episode that contained at least one coronavirus-related term, five MTurk workers read the entire episode script and answered "Yes" or "No" to the following question: "Did [the show] indicate that the virus is likely to infect many people in the US, causing many deaths or serious illnesses, or that many have already become infected and have died or become seriously ill?" We explicitly asked respondents to answer the question based only on the scripts, not their own views on the subject. We impute "No" for each script that does not mention any coronavirus-related terms, and we code "Yes" as 1 and "No" as 0.

Panel B of Figure 1 displays one-week rolling means of this variable for Carlson, Hannity, and the other four shows. Throughout almost the entire period, MTurk workers rate Carlson as portraying the threat of the coronavirus more seriously than the other three shows, and in turn rate the other shows as portraying the threat more seriously than Hannity. In line with the qualitative evidence highlighted above, Hannity converges to Carlson in early to mid-March.

Together, our evidence suggests that coverage of the coronavirus differed enormously between *Tucker Carlson Tonight* and *Hannity*. We next present survey evidence that these differences may have affected viewers' behavior during the period of initial spread of the coronavirus in the United States.

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[9]The words are "coronavirus", "virus," "covid," "influenza", and "flu".

3 Survey

In this section, we present correlations between viewership of different primetime Fox news shows and viewers' self-reported timing of behavioral change in response to the coronavirus. On April 3, 2020, we fielded a survey targeting a representative sample of approximately 1500 Republicans aged 55 or older in cooperation with Luc.id, a survey provider widely used in social science research (Wood and Porter, 2019). We focused on this subsample both because such individuals are more likely to watch Fox News and because the elderly are at increased risk from the coronavirus.[10] As we show in Appendix Table A1, our sample is broadly representative of Republicans aged above 55 and older. All survey materials are available in Appendix D.

Survey design After eliciting demographics, we ask respondents which, if any, of the "Big Three" TV news stations (CNN, MSNBC, and Fox News) they watch at least once a week. 1045 individuals reported that they watched any show on Fox News at least once a week; this is the sample we use in our analysis, given our focus on Fox News viewers. We ask respondents to indicate the frequency with which they watch the major primetime shows on each network on a three-point scale ("never"; "occasionally"; "every day or most days").

We then ask our respondents about any changes in their behavior in response to the coronavirus outbreak. First, we ask whether they have changed any of their behaviors (e.g. cancelling travel plans, practicing social distancing, or washing hands more often) in response to the coronavirus. For those respondents who answer that they have changed behavior, we elicit the date on which they did so.

Results To examine the correlation between viewership of different news shows and the timing of behavioral change, we estimate the following simple specification:

$$\text{TimingChange}_i = \alpha_0 + \beta S_i + \Pi X_i + \varepsilon_i, \tag{1}$$

where TimingChange_i is the number of days after February 1, 2020 on which the respondent reported having significantly changed any of their behaviors in response to the coronavirus, S_i is a vector of indicators for whether the respondent occasionally or regularly watches each of the seven shows, and X_i is a vector of demographic controls.[11] The dependent variable for respondents who report that they have not changed any of their behaviors at the time of the survey is recoded to the date on which the survey was administered (April 3). We employ robust standard errors throughout our analysis.

Panel A of Figure 2 plots the smoothed density function of the reported date of behavioral change separately for viewers of Carlson, Hannity, and other Fox News shows. (The majority of viewers watch more than one show and thus appear in multiple panels.) Panel B of Figure 2 plots the coefficient estimates from regressions of the reported date of behavioral change on indicators for whether the respondent watches *Hannity*, *Tucker Carlson Tonight*, and other Fox News shows. As both panels highlight, viewers of *Hannity* changed their behavior substantially later than viewers of other Fox shows (with a relatively large fraction

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[10]The median age among Fox News viewers is 68.

[11]The elements of S_i are neither mutually exclusive nor jointly exhaustive; viewers who watch multiple shows will have multiple indicators set to one, while viewers that watch none of the five shows will have none of the indicators set to one.

of respondents changing behavior in late March), while viewers of *Tucker Carlson Tonight* changed their behavior earlier than viewers of other shows.

We display these results in regression table form in Table 1. Column 1 shows that viewers of *Hannity* changed their behavior five days later than viewers of other shows ($p < 0.001$), while viewers of *Tucker Carlson Tonight* changed their behavior three days earlier than viewers of other shows ($p < 0.01$); the difference in coefficients is also highly statistically significant ($p < 0.01$). Column 2 of Table 1 reports a linear probability model in which the dependent variable is an indicator for whether the respondent reported changing behavior before March 1; Carlson viewers were 8.8 percentage points more likely and Hannity viewers 12.8 percentage points less likely to have changed their behavior before March 1 than viewers of other Fox shows. Consistent with the convergence in scripts between shows highlighted in Figure 1, the gap between shows diminishes over time (Columns 3 and 4).

Our survey suggests that show content might affect behavior in response to the coronavirus. However, the correlations could be confounded by omitted variable bias or reverse causality: viewers who did not want to believe that the coronavirus was a serious problem or viewers less inclined to changing their behavior might have selected into watching Hannity. Moreover, our outcome is self-reported behavior, which may bias our estimates if respondents systematically misremember that they changed their behavior earlier or later than they actually did.[12] To address these issues, we turn to hard outcome data on COVID-19 cases and deaths, and later turn to an instrumental variable strategy shifting relative viewership of *Hannity* and *Tucker Carlson Tonight*.

4 Overview of Data Sources

Aside from our survey and the show transcripts we use in our previously-described content validation, we employ six primary categories of data in our observational analysis: (1) show viewership data provided by Nielsen at the day-by-show-by-Designated Market Area (DMA) level; (2) COVID-19 cases and deaths data from the Johns Hopkins Coronavirus Research Center at the county-by-day level; (3) county-level demographics from a variety of sources; (4) county-level data on 2016 Republican vote share from the MIT Election Lab; (5) measures of health system capacity from the American Hospital Association at the individual hospital level; and (6) data on sunset timing from www.timeanddate.com.

Viewership data Our show viewership data is provided by Nielsen. Nielsen reports viewership at the Designated Market Area (DMA) level, of which there are 210 in the US. We focus on the continental United States, excluding the two DMAs in Alaska (Anchorage and Fairbanks) and the single DMA in Hawaii (Honolulu).[13] Our dataset contains viewership data between 5pm and 11pm (local time) at the DMA-by-timeslot-by-day level. In addition to the number of TVs watching Fox News, we observe the total number of TVs turned on during each timeslot. We supplement this dataset with 2018 data, previously acquired, on the local market share of each of the "Big Three" networks: CNN, MSNBC, and Fox News. To avoid

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[12]Reassuringly, the average date on which respondents self-report changing their behavior is around March 10, which has been identified as a crucial point in time when most people started changing their behavior, as measured by mobile phone GPS data (Allcott et al., 2020).

[13]We also exclude Palm Springs, CA; this DMA is so small that it does not contain a county centroid, and thus we are unable to consistently map any counties to Palm Springs.

using variation based on *Hannity* and *Tucker Carlson Tonight*, these market shares are calculated based on evening time slots outside of those two shows.

Ideally, one would like to include Fox News viewership data for all DMAs and all days until the end of our sample period. As of April 2020, data for February and March is not yet available. We use available data for January (available until January 29). This allows us to measure *regular* Fox News viewership patterns at the very beginning of the U.S. coronavirus crisis and *only a few days before* some Fox shows began covering the crisis in more depth, allowing us to predict the information to which they would be exposed in the immediate weeks following the end of our viewership sample. Therefore, as long as viewership is relatively stable across a period of only a few weeks, measurement error will be minor. To assess the extent of potential measurement error, we explore our data across weeks within January and find that viewership remains highly stable. In particular, in Appendix Figure A1, we compare ratings of *Tucker Carlson Tonight* and *Hannity* in early January and late January. On the y-axis, we plot the rating in a given DMA on January 29, 2020, the last day for which we have data; and on the x-axis, we plot the rating in that same DMA on January 8, 2020, three weeks prior.[14] Viewership is highly stable; viewership on January 29 and on January 8 are correlated with $\rho = 0.913$. Moreover, because the coronavirus was not yet a salient news story in January (see Panel B of Figure 1) this approach has the benefit of ruling out the possibility that our results are driven by reverse causality, i.e. residents of counties experiencing more coronavirus-related cases and deaths seeking out news minimizing the seriousness of the crisis.

COVID-19 cases and deaths data We use publicly-available county-level data on *confirmed* COVID-19 cases and deaths from Johns Hopkins University (Dong et al., 2020). The data is a panel at the day-by-county level, with data sourced from a variety of agencies, including the World Health Organization, the Centers for Disease Control, state health departments, and local media reports. Throughout our main analyses, we take the logarithm of one plus the cumulative number of cases and deaths, both to correct for outliers with a large number of cases and because the exponential nature by which a virus spreads makes the logarithm normalization natural. However, our results are qualitatively identical and quantitatively extremely similar if we instead transform cases and deaths by the inverse hyperbolic sine rather than the natural logarithm. Appendix C displays all our main results under the IHS transformation.

Data on COVID-19 cases are potentially subject to both classical and non-classical measurement error. For example, many COVID-19 cases are unreported (Lachmann, 2020), and if differential media coverage of the pandemic influences the rate of case detection, then our coefficient estimates will be biased. To the extent that reverse causality affects our estimates — i.e. viewers of *Hannity* being less concerned about the virus, and thus counties with greater viewership of *Hannity* having lower rates of case detection — it should bias our estimates *downward*. Classical measurement error will not bias our estimates, but will decrease their precision. Nonetheless, we urge caution in interpreting our estimated effects on cases given these potential data limitations. Data on COVID-19 deaths is far less subject to both classical and non-classical measurement error.

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[14]To maximize comparability, we compare ratings on the same day of the week (Wednesday). While we could in principle compare ratings between Wednesday, January 29 and Wednesday, January 1, we choose January 8 to avoid capturing differences in viewership on New Years' Day.

Demographics   We collect demographic data at the county level from a wide variety of sources. Our data on age, racial composition, and household income and educational attainment is drawn from the 2018 round of the American Community Survey. We use data on county rurality from the 2010 Census and data on population drawing from the Annual Estimates of the Resident Population for Counties in the United States provided by the U.S. Census Bureau. Our measures of poverty and health insurance are provided by the US Census Bureau under the 2018 Small Area Income and Poverty Estimates (SAIPE) and 2018 Small Area Health Insurance Estimates (SAHIE) programs. Our data on unemployment is from the US Bureau of Labor Statistics' 2019 Local Area Unemployment Statistics (LAUS). Finally, our data on physical health is from the CDC's Behavioral Risk Factor Surveillance System (BRFSS).

2016 Republican vote share   We obtain county-level voting data for the 2016 US Presidential election from the MIT Election Lab, which contains the total number of votes cast and the number of votes cast for each of the major parties.

Health system capacity   We construct measures of health system capacity using data from the American Hospital Association's 2018 Annual Survey. The dataset contains detailed information at the hospital level, including the number of beds available in different units and the number of medical personnel employed by the hospital. Although participation in the survey is voluntary, virtually every hospital in the United States submits data. We aggregate data to the county level and select six natural measures of health system capacity: total number of beds, total number of ICU beds, total admissions, total inpatient days, total number of personnel, and total number of nurses.

Sunset timing   Our data on sunset timing is drawn from `www.timeanddate.com`. We extract sunset times for February 1, 2020 for all counties based on their centroids, and we construct the sunset time of each DMA as the population-weighted mean sunset time of all counties in that DMA.

5   Effects on Health Outcomes

In this section, we first discuss the empirical challenge in identifying causal effects. We then present OLS evidence on the effects of differential viewership of the two shows on COVID-19 cases and deaths. Finally, we discuss our instrumental variable approach and present results.

5.1   Empirical Challenge

Obviously, show viewership is not randomly assigned: people self-select into television shows that they like to watch. For example, it is well known that Fox News viewers are over-represented among older individuals and that age is a determinant of COVID-19 mortality. Our object of interest, though, is not to understand the effect of watching Fox News *per se*, but to understand the role of differential information spread by the different shows. Since selection into viewership of *Hannity* and *Tucker Carlson Tonight* is less well known, we begin by examining county-level correlates of their relative popularity. As Appendix Figure A2 displays, counties with a relative preference for *Hannity* differ from counties with a relative preference for *Tucker*

Carlson Tonight on a number of *observable* dimensions, including racial composition, population density, and education. For example, a high share of blacks is positively correlated with popularity of *Hannity*, while a high share of Hispanics is negatively correlated. Rural areas, areas with less education and with less health insurance coverage tend to favor *Hannity* over *Tucker Carlson Tonight*. In contrast, the relative popularity of the two shows is not strongly associated with the share of people over the age of sixty five.

Together, these patterns suggest that a simple OLS estimate would likely be severely biased. The *direction* of the bias, however, is less clear. For example, COVID-19 has severely affected African-American communities, for many reasons beyond *Hannity*'s relative popularity. In this case, we would suspect a positive bias. On the other hand, *Hannity* is less popular in places with less health insurance coverage, which would suggest a negative bias.

In what follows, we will show in a transparent manner how OLS estimates evolve under various combinations of county-level controls and fixed effects. We will then present an instrumental variable approach aimed at solving the identification problem.

5.2 OLS estimates

Specification   Our explanatory variable of interest is the DMA-level average difference between viewership of *Hannity* and viewership of *Tucker Carlson Tonight* across all days in January 2020 when both shows are aired. We scale this variable a standard normal distribution for ease of interpretation. We estimate the following specification separately for each day between February 24 and April 13 (for cases) and between March 1 and April 13 (for deaths):

$$Y_{ct} = \alpha_t + \beta_t D_c + \Pi_t X_c + \varepsilon_{ct} \tag{2}$$

where Y_{ct} is an outcome (log one plus cases or log one plus deaths) in county c on day t, D_c is the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*, and X_c is a vector of county-level controls. Since the idea is to look at differential viewership across the two major shows on Fox News, while holding constant the popularity of the network, we always control for the "Big Three" cable TV market shares of Fox News, MSNBC and CNN.[15] To account for the overall popularity of watching Fox News over any other network, or watching TV around the time of *Hannity* and *Tucker Carlson Tonight*, we also include the number of households watching Fox News as a share across all networks, and the average number of TVs turned on to non-Fox channels between 8pm and 11pm Eastern Time (three variables, each capturing one hour). We always include log total population and population density since at a minimum we would expect these to be key determinants of COVID-19 outcomes. To account for unobservable determinants of health outcomes that differ across localities, we will show results using (1) no geographical fixed effects, (2) Census division (nine in total) fixed effects, and (3) state fixed effects. Because our viewership data is at the DMA level and to allow for within-market correlation in the error term, we cluster standard errors at the DMA level, resulting in a total of 206 clusters. Figure 3 displays the values of D_c across the U.S., residualized by the controls described above.

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[15]We omit CNN since it is collinear with the other two.

Our most extensive OLS specification, which is the preferred one for the reasons outlined above, will include state fixed effects and an extensive set of county-level controls for *race* (the percent white, Hispanic, and black); *education* (the share lacking high school degrees and the share lacking college degrees, for women and men separately); *age* (the percent over the age of sixty-five); *economic* factors (the percent under the federal poverty line, log median household income, the unemployment rate); *health* factors (the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018); *political* factors (Republican vote share and the log total number of votes cast in the 2016 Presidential election) and *geographical* factors (latitude, longitude, the percent in the county living in rural areas, and the log of the distance to Seattle — the initial epicenter of the coronavirus crisis and the site of the first case and death).

Results We report day-by-day results for cases and deaths in Figure 4, including all controls and state fixed effects. The association between relative viewership and both cases and deaths becomes stronger over time until the coefficient on cases peaks in late March and then begins to decline; at the time of writing, the coefficients on deaths are continuing to rise. The lag between the coefficient estimates on cases and the coefficient estimates on deaths is consistent with the approximately two-to-three week lag between infection and death (Wu et al., 2020). Effects on cases are statistically significant at the 5 percent level throughout the majority of the period, while effects on deaths are only statistically significant at the 5 percent level in late March and April. Panel A of Tables 2 and 3 replicate these results in regression table form, reporting OLS results at one-week intervals. Effects on cases start to rise in late February and peak in mid-to-late March before starting to decline, consistent with the convergence in coronavirus coverage between Hannity and Carlson. A one standard deviation greater viewership difference is associated with approximately 2 percent more cases on March 7 ($p < 0.01$), 5 percent more cases on March 14 ($p < 0.01$), and 11 percent more cases on March 21 ($p < 0.01$). The effect size begins to decline, but our 8 percent effect size estimate on April 11 remains remains statistically significant at the 10 percent level. Deaths follow a similar trajectory on a two-week lag: our estimates imply that a one standard deviation greater viewership difference is associated with 2 percent more deaths on March 21, 5 percent more deaths on March 28, and 8 percent more deaths on April 8, and 10 percent more deaths on April 11.

To probe the robustness of our estimates, we choose a single day for cases — March 14, two weeks into March — and a single day for deaths — March 28, two weeks after our chosen date for cases (given the lag between cases and deaths). We then run our specifications under *every possible combination* of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). Figure 5 reports coefficient estimates and 90 percent and 95 percent confidence intervals for each of these 768 models. The majority of coefficient estimates on cases and deaths are statistically significant at the 5 percent level. All coefficient estimates from specifications including state fixed effects, our most demanding and most precisely estimated specifications, are significant at the 5 percent level. Moreover, our coefficient estimates are relatively stable. Appendix Figure A3 shows a generally positive correlation between the R^2 of each model and the coefficient estimate, providing suggestive evidence that, if anything, omitted variable bias seems to be downward biasing our coefficient of interest. To ensure that our results are not driven by a small number of outliers, we residualize our outcome variables and the standardized difference in viewership by

our controls and fixed effects, then plot the residuals of our outcome variables against the residuals of the viewership difference in Appendix Figure A4. Neither plot gives cause for concern that our estimates are driven by outliers.

A limitation of the OLS approach is that, ultimately, it requires an assumption based on selection-on-observables. We may still be concerned about unobservable factors driving both viewership preferences for *Hannity* over *Tucker Carlson Tonight* and COVID-19 outcomes. To address this concern, we develop a novel instrumental variables strategy to isolate plausibly exogenous variation in relative viewership.

5.3 Instrumental variable approach

To address concerns about unobservables biasing our estimates, we require an instrument that shifts relative viewership of *Hannity* and *Tucker Carlson Tonight*, yet is orthogonal to (i) underlying *preferences* for the shows and (ii) any socioeconomic and demographic factors relevant for the spread of coronavirus or for coronavirus mortality, such as income, racial composition, and health system capacity. In this section, we describe a novel approach to generate plausibly exogenous variation in relative viewership of these two shows exploiting cross-DMA variation in when the sun sets. For now, we will leave aside potential spillover effects onto viewership of other evening shows on Fox News beyond *Hannity* and *Tucker Carlson Tonight*. However, in Section 6, where we investigate mechanisms more in depth, we will allow for arbitrary spillovers and generalize our analysis to *all* Fox News evening shows.

5.3.1 Identification strategy

Construction of instrument We begin by showing important systematic patterns that drive TV viewership over the course of the evening. In particular, DMAs across the country exhibit a relatively consistent inverse-U shaped relationship between the time since sunset and total TV viewership. Panel A of Figure 6 plots a non-parametric local polynomial fitting the relationship between time since sunset and the total number of TVs tuned to non-Fox channels. On average across the country, TV viewership peaks 2.5 hours after sunset and then declines smoothly. Panel A also shows a histogram depicting, at each twelve-minute interval relative to sunset, the number of DMAs in which *Tucker Carlson Tonight* begins in that interval (green) and in which *Hannity* begins in that interval (red). Because both shows are broadcast live — *Tucker Carlson Tonight* at 8pm Eastern Time and *Hannity* at 9pm Eastern Time — both shows are aired much earlier and closer to sunset in more Western time zones (e.g. 5pm and 6pm Pacific Time, respectively). Yet as Panel B of Figure 6 highlights, even holding constant what (clock) time shows air, there remains substantial variation in start time relative to sunset. For example, on February 1, 2020, the sun set at 6:05pm in Louisville, KY — one of the westernmost cities on Eastern Time — whereas it set at 5:15pm in New York, NY, nearly an hour earlier.[16] Finally, to provide intuition at the level of DMAs – the variation used for the construction of the instrument – Figure 7 plots the viewership curve for a random sample of DMAs, alongside associated *Tucker Carlson Tonight* and *Hannity* start times. We can see that DMAs differ in the precise shape of their viewership curve over the course of the evening, but the vast majority exhibit a clear inverted-U pattern.[17]

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[16]Appendix Figure A5 highlights this phenomenon across the continental United States, plotting sunset times in each county on February 1, 2020.

[17]Episodes of *Tucker Carlson Tonight* and *Hannity* are generally re-run three hours after they first air, and because our data spans 5pm to 11pm, we observe repeats in more western time zones but not in Eastern Time. In order to avoid making

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Our identification strategy exploits cross-DMA variation in sunset timing and viewership preferences alongside timezone-specific variation in local airtimes of *Hannity* and *Tucker Carlson Tonight*, such that cross-DMA variation in the predicted amount of total TV viewership during Hannity's timeslot — or more precisely, total non-Fox TV viewership during this timeslot — generates variation in relative viewership of *Tucker Carlson Tonight* vs. *Hannity*. Let H_{ds} denote viewership of *Hannity* in DMA d and during timeslot s. Let $\widehat{\text{NonFoxHannity}}_{d,s}$ denote the predicted total number of TVs tuned on in DMA d at time s, *leaving out TVs watching Fox News* (i.e. leaving out TVs watching *Hannity*).[18] We predict NonFoxHannity$_{d,s}$ parametrically for each DMA using a third-order polynomial. Denoting by n_d the sunset time in DMA d, we have:

$$\text{NonFoxHannity}_{ds} = \alpha_d + \delta_{d1}(s - n_d) + \delta_{d2}(s - n_d)^2 + \delta_{d3}(s - n_d)^3 + \epsilon_{ds}$$

We map the fitted values $\widehat{\text{NonFoxHannity}}_{ds}$ in Appendix Figure A6.

In constructing our instrument, we also exploit substantial variation in the market share of Fox News, which we map in Appendix Figure A7. The intuition is simple: the difference in viewership between the two shows will be larger when the fraction of TVs turned on during Hannity's time slot is larger, and when the total share of viewers watching Fox News is large. Thus, our identifying variation is based on *interaction* of the predicted fraction of (non-Fox) TV viewership during Hannity's timeslot with the local Fox News share (again computed leaving out *Hannity* and *Tucker Carlson Tonight* to avoid capturing DMA-specific preferences for either anchor). Letting FoxShare$_d$ denote the viewership share of Fox News in DMA d, leaving out *Hannity* and *Tucker Carlson Tonight*, our instrument is given by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$.

Specifications   Our first-stage and reduced-form specifications, respectively, are:

$$D_{cd} = \beta_0 + \beta_1 \widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d + \beta_2 \widehat{\text{NonFoxHannity}}_d + \beta_3 \text{FoxShare}_d + \Pi_t X_c + \epsilon_{cd},$$

$$Y_{cdt} = \beta_0 + \beta_1 \widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d + \beta_2 \widehat{\text{NonFoxHannity}}_d + \beta_3 \text{FoxShare}_d + \Pi_t X_c + \epsilon_{cd},$$

where, in the first-stage, D_{cd} is the standardized difference between the number of viewers of *Hannity* and *Tucker Carlson Tonight* in county c of DMA d, $\widehat{\text{NonFoxHannity}}_d$ is the predicted fraction of TVs turned to non-Fox channels during Hannity's timeslot in DMA d (containing county c) and FoxShare$_d$ is the Fox market share in DMA d (leaving out *Tucker Carlson Tonight* and *Hannity*). As in the OLS, in the reduced form, we run cross-sectional regressions for some outcome Y_{cdt} (cases, deaths) in county c of DMA d on day t. We also always include the same parsimonious set of baseline county-level controls from our OLS specification, X_c, except that to avoid a bad controls problem due to the variation our instrument is meant to capture, we control for the *predicted* share of households with TVs turned on during between 8pm and 10pm ET rather than the actual values. We will also show results using the full set of controls and fixed

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assumptions about viewership patterns in western time zones relative to Eastern Time by failing to include Eastern Time viewership that falls outside of the window covered by our data, we simply set viewership to the average viewership across both airings in DMAs in which we observe re-runs.

[18] We leave out TVs watching Fox News in order to capture a general DMA preference for TV viewership at a given time rather than specific preferences for Fox News. The logic is analogous to the logic of the leave-one-out estimator used in Bartik instruments (Bartik, 1991).

effects, which also are the same as in the OLS specifications.

The instrument is relevant if $\beta_1 > 0$. The underlying logic is simple: if people like to turn on their TVs to watch *something* when *Hannity* happens to be on instead of or any other Fox show, especially *Tucker Carlson Tonight*, the likelihood that viewers are shifted into watching Hannity is disproportionately large in areas where Fox News is popular in general.

Correlation with pre-determined characteristics   To illustrate the spatial distribution of the induced variation, Figure 9 maps the residuals of our instrument, where the instrument has been residualized according to the specification above with the baseline controls. In Appendix Figure A8, we report regressions using each county-level covariate as an outcome, scaled to a standard normal distribution to facilitate interpretation, on our instrument. No coefficient is significantly different from zero at the 5 percent level, and coefficient magnitudes are generally small. This lends credibility to the identification strategy. Nevertheless, as in the OLS approach, we will show in a transparent manner the extent to which results are robust to permutations across all possible combinations of the groups of covariates.

Exclusion restriction   Our approach is motivated by the fact that (1) *Hannity* and *Tucker Carlson Tonight* are the most-viewed shows in the United States, and by the fact that (2) the differences in coronavirus coverage were greatest between Hannity and Carlson, with the divergence emerging in early February and lasting for several weeks until eventual convergence by mid-March. In this sense, the instrument is designed to shift differential exposure to misinformation in the early stages of the pandemic through its effects on the two most popular and most relevant shows on Fox News. At a first-order approximation, this seems reasonable. However, as we will discuss more thoroughly in Section 6, even if our instrument is relevant so that $\beta_1 > 0$, it is important to consider potential violations of a narrowly defined exclusion restriction and how such violations influence how we should interpret results. In particular, if one assumes that all of the effects of the instrument on COVID-19 outcomes operate *exclusively* through differential exposure to *Hannity* over *Tucker Carlson Tonight* – the outcome variable in the first-stage regressions – then one would also have to assume that our instrument does not have any spillovers, negative or positive, onto other shows. This is, of course, a strong assumption. For example, it may be that our instrument pushes Fox viewers into regularly watching more *Hannity* and less *Tucker Carlson Tonight*; but that this in turn make them less (or more) interested in watching some other Fox News show. Such spillovers could be very complex, as they would depend on underlying preferences – how shows are complements and substitutes. Patterns of complementarity or substitution between relative viewership of *Hannity* versus *Tucker Carlson Tonight* and viewership of other shows would then violate a narrow exclusion restriction and complicate interpretation of the two-stage least squares regressions.

For these reasons, while we will proceed in this section under the exclusion restriction that the reduced form mainly captures effects from exposure to initially diverging (followed by converging) coverage of the coronavirus by *Hannity* and *Tucker Carlson Tonight*, it is important to keep in mind the aforementioned limitations of the approach. We will provide 2SLS estimates, but we urge caution in interpreting coefficients. We view 2SLS as a convenient way to scale the reduced form in order to assess the magnitudes involved under the narrow exclusion restriction. Most importantly, in Section 6, we will relax the exclusion restriction assumption and employ a more general approach allowing for arbitrary spillovers across Fox News programs,

while still allowing us to investigate the hypothesized mechanism of exposure to differential coverage of the coronavirus crisis.

Instrument relevance As we show graphically in Figure 8, and in regression table form in Appendix Table A2, our instrument strongly predicts viewership of *Hannity* relative to *Tucker Carlson Tonight*. The first-stage F-statistic is never lower than 8, but is generally substantially higher when fixed effects are included. Coefficient estimates are relatively stable: where a one standard deviation higher value of the instrument is associated with approximately a one standard deviation higher viewership of *Hannity* relative to *Tucker Carlson Tonight* ($p < 0.001$), with somewhat tighter confidence intervals when fixed effects are included. For consistency and transparency, we will show reduced form and 2SLS results across all these specifications, as well as permutations across all of the additional combinations.

5.3.2 Results on COVID-19 Cases and Deaths

We next turn to our reduced form and instrumental variable estimates on downstream health outcomes: COVID-19 cases and deaths.

Reduced form effects Our reduced form specification follows our specification for the first stage, but studies the impact of our instrument on deaths and cases, conditional on the same set of controls as in the first-stage equation.

Panel A of Figure 10, which for consistency and ease of comparison mirrors the OLS specification of Figure 4 (that is, the specification with the most extensive set of controls and fixed effects), shows the day-by-day reduced form effects of our instrument on cases and deaths. Effects on cases start to rise in early March and peak in mid-March before gradually declining, consistent with Hannity's changing position on the coronavirus. A one-standard deviation higher value in the instrument is associated with approximately 12 percent more cases on March 7 ($p < 0.01$), 33 percent more cases on March 14 ($p < 0.01$), and 29 percent more cases on March 21 ($p < 0.01$). The effect size gradually declines to a (statistically insignificant) 7 percent on April 11. The initial divergence and eventual convergence of effects on COVID-19 cases are consistent with our proposed mechanism that differential reporting between Hannity and Carlson about the coronavirus from throughout February are driving our results, as we will explore more fully in the next subsection and in Section 5.3.3.

Consistent with medical evidence, effects on deaths start emerging approximately three weeks after cases. The effects on deaths gradually rise from mid-March until the end of the month and then level off. A one-standard deviation higher value in the instrument is associated with 22 percent more deaths on March 28 ($p < 0.01$), 36 percent more deaths on March April 4 ($p < 0.01$), and 31 percent more deaths on April 11 ($p < 0.1$).

Two-stage least squares To quantify effect sizes, we scale the reduced-form estimates by the first stage coefficient using a simple two-stage-least squares procedure. 2SLS allows us to compute confidence intervals on the effects if we are willing to impose the exclusion restriction that all effects operate through relative exposure to *Hannity* relative to *Tucker Carlson Tonight*. However, as mentioned above, it is important to

keep in mind the implicit assumptions that we need to make about consumer preferences and cross-show spillovers.

With this caveat in mind, Panel B of Figure 10 shows the day-by-day 2SLS estimates on cases and deaths. The qualitative pattern follows the pattern from the reduced-form estimates discussed above. A one-standard deviation higher viewership of *Hannity* relative to *Tucker Carlson Tonight* is associated with approximately 11 percent more cases on March 7 ($p < 0.01$), 30 percent more cases on March 14 ($p < 0.001$), and 27 percent more cases on March 21 ($p < 0.01$); the effect then declines to a statistically-insignificnat 6 percent more cases on April. As above, a one-standard deviation greater viewership of *Hannity* relative to *Tucker Carlson Tonight* is associated with 21 percent more deaths on March 28 ($p < 0.001$), 33 percent more deaths on April 4 ($p < 0.01$), and 28 percent more deaths on April 11 ($p < 0.10$).

As in Section 5.2, we then run our specifications under every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We again focus on March 14 for cases and March 28 for deaths. Figure 11 reports coefficient estimates and 90 percent and 95 percent confidence intervals for each of these 768 models. All coefficient estimates on cases and deaths are statistically significant at the 5 percent level. Once again, we probe robustness to outliers by residualizing our outcome variables and the instrument by our controls and fixed effects, then plotting the residuals of our outcome variables against the residuals of the instrument in Appendix Figure A10. As before, neither plot gives cause for concern that our estimates are driven by outliers.

5.3.3 Mechanism: differential coverage

Taken together, our evidence suggests that higher viewership of *Hannity* relative to *Tucker Carlson Tonight* is associated with a greater number of COVID-19 cases and deaths during the early onset of the coronavirus pandemic. Given the qualitative evidence highlighted in Section 2, the timing of these effects on cases and deaths already suggests an important role of differences in information content between the two shows in driving results. We now examine the timing of deaths and cases relative to the Carlson-Hannity coverage gap more closely by constructing a day-by-day index quantifying the extent to which coverage of the coronavirus on these two shows differed. In particular, we return to our Mechanical Turk coding results from Section 2.2, constructing our index by subtracting the average of the five ratings for each episode of *Tucker Carlson Tonight* from the average of the five ratings for the *Hannity* episode on that same day. Thus, higher values of the index on a given day indicate that the *Tucker Carlson Tonight* episode that aired on that day portrayed the coronavirus as a much more serious threat than the *Hannity* episode on the same day, while lower values of the index indicate that the two episodes were similar in their coverage.

Figure 12 plots this "pandemic coverage gap" over time. The gap peaks in mid-February, a period during which there was no discussion of the coronavirus on *Hannity* and during which *Tucker Carlson Tonight* discussed the topic on virtually every episode, before declining to zero by mid-March. The figure also plots the 2SLS estimates of the effects of the Hannity-Carlson viewership gap on cases and deaths. The trend in coefficient estimates on cases closely mirrors the trend in the Carlson-Hannity pandemic coverage gap with a lag of approximately one month, while the trend in coefficient estimates on deaths follows with an additional two-week lag. These findings suggest that the effects of differential coverage to *Hannity* and

Tucker Carlson Tonight that we document are not driven by longer-term past differential exposure to the shows or unobservable factors correlated both with the spread of the virus and preferences for one show over the other, but rather by differences in how the two shows covered the pandemic during its initial stages of spread.

5.3.4 Alternative instrument

As a robustness check, we present estimates from an alternative instrumental variables approach that follows the same logic as the one based on local sunset times, but that is substantially simpler in its execution. Rather than *predicting* the fraction of TVs tuned to non-Fox channels during Hannity's timeslot based on sunset times, which in principle opens up questions about the appropriate functional form and the uncertainty surrounding its estimation, we simply take the *actual* mean of TVs tuned to non-Fox channels during Hannity's timeslot during the month of January 2020, NonFoxHannity$_d$. As before, we interact this value with Fox News' viewership share in the DMA (calculated leaving out *Hannity* and *Tucker Carlson Tonight*), FoxShare$_d$ to construct our instrument. This approach therefore closely resembles a standard shift-share instrument (Bartik, 1991), in which the (endogenous) "share" is the Fox viewership share in the DMA and the (exogenous) "shift" is generated by cross-DMA differences in preferences for watching TV during the timeslot when *Hannity* is aired. Like our main instrument, conditional upon the small set of controls accounting for local viewership patterns, this alternative instrument is uncorrelated with our extensive set of county-level demographic characteristics (Figure B2) and measures of health system capacity (Figure B3). In Appendix B, we replicate our analysis with this alternative instrument and find qualitatively identical and quantitatively similar results.

5.4 Assessing magnitudes along the COVID-19 curve

How should one interpret the magnitudes of the coefficients, given that they are estimated at different moments in time as the pandemic spreads? To illustrate, we perform a simple back-of-the-envelope calculation using information on actual COVID-19 case trajectories across counties and combine those with the estimated effects of viewership reported in Figure 10. In particular, by construction, the 2SLS coefficient for any given day will capture the percent increase in cases from a one-standard deviation greater viewership difference between *Hannity* and *Tucker Carlson Tonight*. We use this information by first taking the actual mean cases for each day — effectively capturing the COVID-19 trajectory for a 'representative' county — and adding the implied percent increase as given by the estimated coefficient for that day. We then plot the logarithmic trajectory for actual cases, together with the calculated counterfactual trajectory. We then conduct the same exercise using the data and estimates on COVID-19 deaths.

Panel A of Figure 13 plots the trajectories for cases: (i) log cases for a representative county (in black) and (ii) the implied counterfactual for counties with a one-standard deviation higher viewership of *Hannity* versus *Tucker Carlson Tonight* (in gray). The *relative* magnitude peaks around March 15 at slightly above 0.3 log points, corresponding to approximately a 30 percent increase from the base. However, given the logarithmic scale, the implied magnitude on cases keeps growing in economic importance as the pandemic expands, before slowly converging and turning statistically insignificant. It is noteworthy that by the end of the sample period, the estimated effect has not (yet) turned negative. Put differently, the evidence is

consistent with differential viewership of *Hannity* over *Tucker Carlson Tonight* having induced a steeper curve early on in the pandemic, as opposed to efforts aimed at "flattening the curve".

Panel B of Figure 13 plots the trajectories for estimated deaths. Similar patterns emerge, except they arise approximately two weeks later. Here, the estimated coefficient of the relative effect peaks in the first week of April, at around 0.4 log points, as Figure 10 also shows clearly. The relative effect remains relatively stable with a slight decline. As the pandemic spreads, however, the slightly declining relative magnitude becomes more economically meaningful as the base grows.[19]

6 Generalized Exposure across Fox News Shows

Our estimates in Section 5 focused on the effects of our instrument on differential viewership of *Hannity* and *Tucker Carlson Tonight*. These two shows were the largest outliers on Fox News in their coverage of the coronavirus (in opposite directions), and are the most widely-watched programs on the network and in the United States, suggesting that the viewership gap between the two shows alone had effects on cases and deaths. Yet as we discuss in Section 5.3.1, differences in viewership across those two Fox News shows may, through various spillovers, also correlate with many other shows. Specifically, for any given DMA, regular viewership of *Tucker Carlson Tonight* (airing 8pm-9pm ET) and *Hannity* (airing 9pm-10pm ET) could lead to positive or negative selection into various combinations of: *The Five* (5pm-6pm ET); *Special Report with Bret Baier* (6pm-7pm ET); *The Story with Martha MacCallum* (7pm-8pm ET); *The Ingraham Angle* (10pm-11pm ET); and *Fox News at Night* (11pm-12pm ET).[20] Despite the fact that the other evening shows are neither as widely watched as *Hannity* and *Tucker Carlson Tonight*, nor as extreme in their coverage, their content may also have influenced COVID-19 outcomes. In this case, the narrow exclusion restriction, which assumes that effects operate through regular viewership of *Hannity* or *Tucker Carlson Tonight*, would be violated. The fundamental research question of this paper concerns the role of misinformation, and so we now turn to a more general approach to capture viewers' (predicted) exposure to misinformation on Fox News.

Specifically, for each DMA, we first calculate a measure of predicted local exposure to information about the pandemic across *all* evening-time shows on Fox News. This measure allows us to consider the broad information set to which regular Fox News viewers as of January 2020 – at the very beginning of the U.S. coronavirus crisis and *only a few days before* some Fox shows started ramping up their coverage of the crisis – would be exposed in the following weeks. In other words, since we are using data from January to capture regular viewership patterns, this exercise amounts to predicting local exposure to a *generalized pandemic coverage index* across all Fox evening shows in February.[21]

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[19]In Appendix Figure A11, we present results from an equivalent exercise using the OLS estimates. The magnitudes of the estimated effects are in general smaller, but remain significant for a longer period.

[20]Obviously, there could also be spillovers to day-time Fox News shows, but such selection would arguably be less significant given that TV is primarily viewed between 5pm and 11pm. Cross-network spillovers are also possible, into MSNBC for example; capturing such spillovers is beyond the scope of this paper. Such spillovers are likely minor given that viewers tend to favor shows within the same network. Indeed, in the survey discussed in Section 3, 73 percent of respondents report that Fox News is the only cable TV network they watch at least once a week.

[21]From an identification perspective, one advantage of using viewership data immediately before shows started diverging in their coverage of the coronavirus is that any reverse causality, from endogenous selection into shows based on such coverage, can arguably be ruled out. One could, in principle, use February viewership data and solve this problem using an instrumental variable strategy. At the time of writing, however, Nielsen has not yet released February viewership data across all the DMAs

We combine our data on viewership shares of the different shows at the DMA level with our Mechanical Turk episode coding results to construct a measure of information exposure, the *pandemic coverage index*, as the average of the degree to which each show portrayed the coronavirus as a serious threat to the United States, weighted by viewership shares of the show in each DMA. More formally, we define r_{st} to be the average rating of show s on day t and m_{sd} to be the average viewership share of show s in DMA d. Then the *daily exposure* e_{dt} of a DMA is given by:

$$e_{dt} := \sum_{s \in S_d} r_{st} m_{sd}.$$

where S_d is the menu of shows between 5pm and 11pm in DMA d. We rescale e_{dt} in terms of percentage deviations from the mean value of e_{dt} across all DMAs on day t, $\bar{e}_d$, denoting the rescaled variable $\tilde{e}_{dt}$:

$$\tilde{e}_{dt} := \frac{e_{dt} - \bar{e}_t}{\bar{e}_t}.$$

We then construct the pandemic coverage index for DMA d as the mean of $\tilde{e}_{dt}$ throughout the month of February:

$$PCI_d := \frac{1}{|\text{Feb}|} \sum_{t \in \text{Feb}} \tilde{e}_{dt} = \frac{1}{29} \sum_{t \in \text{Feb}} \tilde{e}_{dt}.$$

The index therefore captures an (inverse) local "stock" of exposure to news on Fox News underplaying the pandemic threat throughout February relative to the mean exposure across DMAs in the same period. For ease of interpretation, we scale the index to a standard normal distribution. Because we are broadly interested in the effects of misinformation, and to be consistent with our previous figures, we use the inverse of our pandemic coverage index, $-1 \times PCI_d$ throughout the rest of this section.

Columns 1 and 2 of Table 4 highlight that our measure of viewership of *Hannity* relative to *Tucker Carlson Tonight* strongly predicts the pandemic coverage index ($p < 0.001$), whether we include only the minimum set of controls to capture local viewership patterns or we condition on the full set of controls employed in Section 5.2. Next, we examine the extent to which our instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$, is associated with the pandemic coverage index. Columns 3 and 4 of Table 4 show that our instrument is strongly and significantly associated with the pandemic coverage index, again whether we include only the minimum set of controls or we condition on the full set of county characteristics. Finally, in Columns 5 and 6 of Table 4, we examine the relationship between the pandemic coverage index and COVID-19 cases and deaths through 2SLS. We follow the approach from Section 5.3, but we use the pandemic coverage gap as the endogenous variable instead of the standardized difference in viewership of *Hannity* versus *Tucker Carlson Tonight*, allowing us to fully capture spillovers between shows on Fox News. Our results suggest that a one percentage point increase in the inverse of the pandemic coverage index increases the number of cases by 3,96 percent on March 14 ($p < 0.001$) and the number of deaths by 2,83 percent by March 28 ($p < 0.001$).

In Figure 14, we estimate the same 2SLS specifications separately for each day, allowing us to examine the relationship between the inverse pandemic coverage index and health outcomes over time. The effect of the inverse pandemic coverage index on cases peaks in mid-March and then begins to decline, while effects

in our sample.

on deaths appear to level off in early April and may, at the time of writing, be beginning to decline (though the wide confidence intervals suggest caution in interpretation).

7   Conclusion

Examining the effects of misinformation is particularly important during a pandemic given the large externalities involved and the significant consequences of misinformed behavior for individuals' health and for the health care system as a whole. The two most widely-viewed cable news shows in the United States — *Hannity* and *Tucker Carlson Tonight*, both on Fox News – originally took very different stances on the risks associated with the novel coronavirus. While *Hannity* downplayed the threat during the initial period of the virus' spread in the United States, *Tucker Carlson Tonight* warned its viewers that the virus posed a serious threat from early February. In this paper, we show that differential exposure to these two shows affected behavior and downstream health outcomes.

We begin by validating differences in content with independent coding of shows' transcripts. Consistent with the differences in content, we present new survey evidence that Hannity's viewers changed behavior in response to the virus later than other Fox News viewers, while Carlson's viewers changed behavior earlier. Using both OLS regressions with a rich set of controls and an instrumental variable strategy exploiting variation in the timing of TV consumption, we then document that greater exposure to *Hannity* relative to *Tucker Carlson Tonight* increased the number of total cases and deaths in the initial stages of the coronavirus pandemic. Moreover, the effects on cases start declining in mid-March, consistent with the convergence in coronavirus coverage between the two shows. Finally, we also provide additional suggestive evidence that misinformation is an important mechanism driving the effects in the data.

It is important to note that our results do not speak to the longer-term effects of exposure to the two shows, which might include additional health and information spillovers. Still, our findings indicate that provision of misinformation in the early stages of a pandemic can have important consequences for health outcomes.

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Figures

Figure 1: Show content validation

Panel A: Counts of coronavirus-related terms by episode (one-week rolling means)
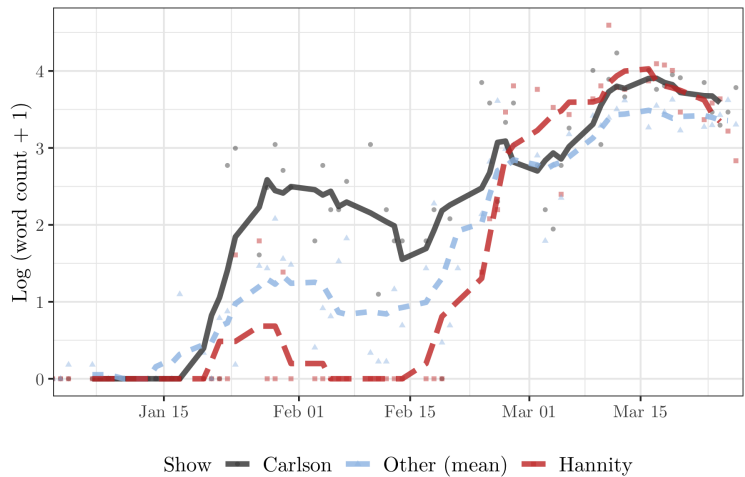
Panel B: MTurk seriousness rating by episode (one-week rolling means)
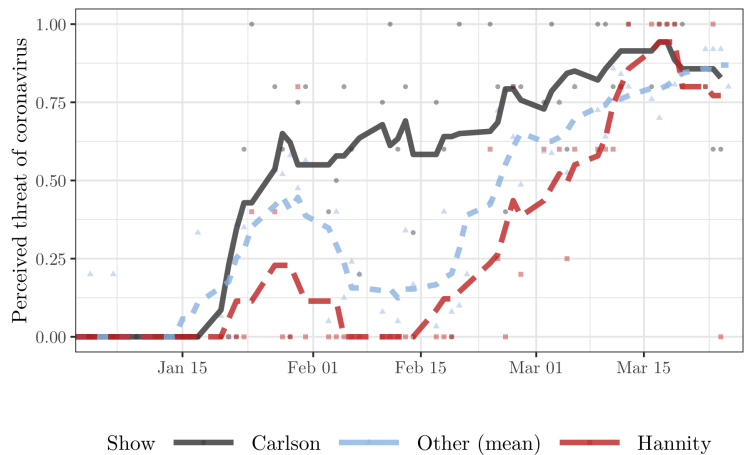
Notes: Panel A shows counts of coronavirus-related terms (coronavirus, COVID, virus, influenza, and flu) separately for *Hannity*, *Tucker Carlson Tonight*, and the other Fox News shows aired on Fox News between 5pm and 11pm local time across all four major time zones in the continental US (*The Five*, *Special Report with Bret Baier*, *The Story with Martha MacCallum*, *Fox News at Night*, and *The Ingraham Angle*). Panel B shows the seriousness rating for each episode, constructed as an average of Amazon Mechanical Turk ratings. For each show containing at least one coronavirus-related term, five MTurk workers read the entire script and answered "Yes" or "No" to the following question: "Did [the show] indicate that the virus is likely to infect many people in the US, causing many deaths or serious illnesses, or that many have already become infected and have died or become seriously ill?" We impute "No" for each episode that does not mention any coronavirus-related terms and recode "Yes" to 1 and "No" to 0.

Figure 2: Timing of behavioral change by show viewership

Panel A: Densities

Panel B: Coefficient estimates
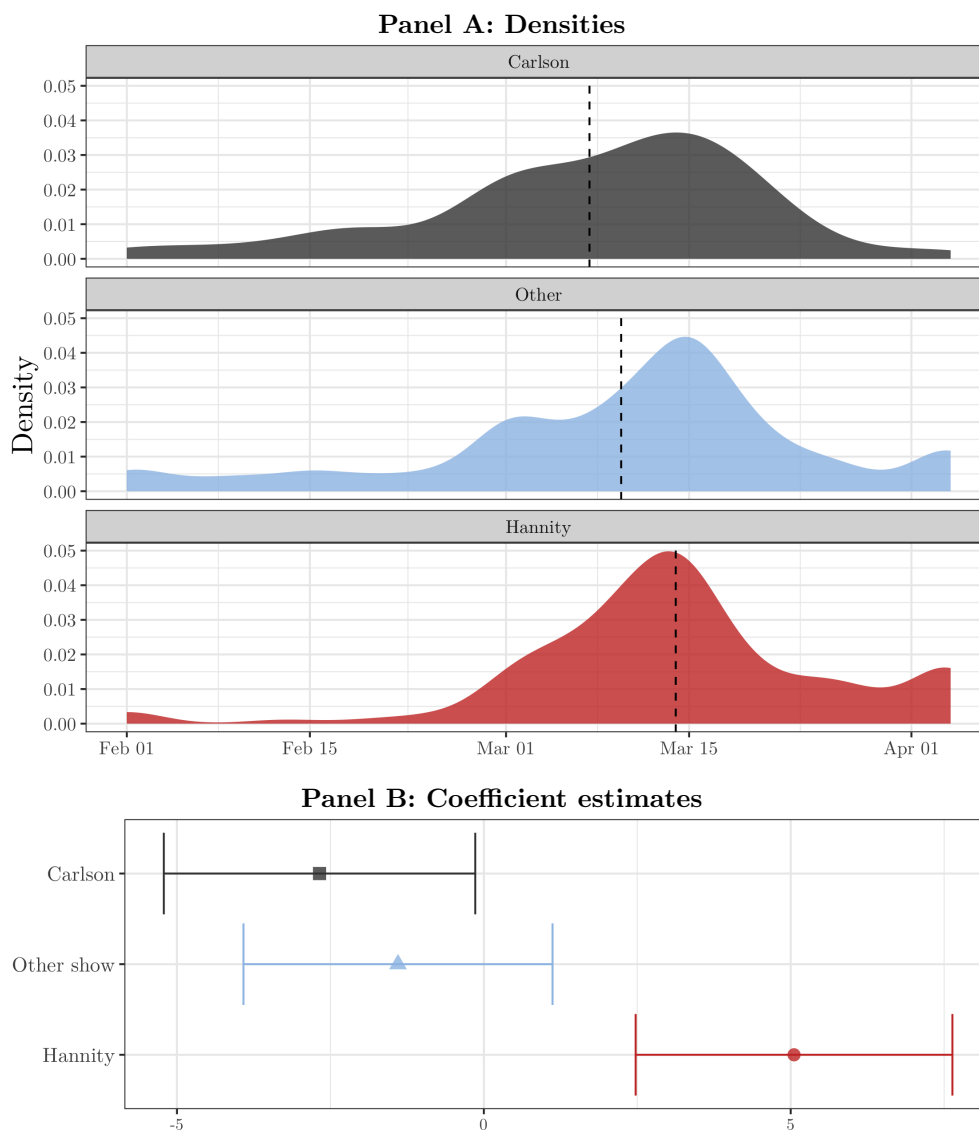
Notes: Panel A of Figure 2 displays the density function of respondents' reported day of behavior change in response to the coronavirus, from our survey of 1045 Republican Fox News viewers over the age of 55. Respondents were asked to indicate the date on which they changed any of their behaviors (e.g. cancelling travel plans, practicing social distancing, or washing hands more often) in response to the coronavirus. The upper panel (in black) shows the density function for viewers of *Tucker Carlson Tonight*; the lower panel (in red) shows the density function for viewers of *Hannity*; and the middle panel (in blue) shows the average density function for viewers of any of the other shows on Fox News between 5pm and 11pm local time across all four major time zones in the continental US: *The Five*, *Special Report with Bret Baier*, *The Story with Martha MacCallum*, *Fox News at Night*, and *The Ingraham Angle*. For respondents who report that they have not changed any of their behaviors by the date of the survey, we impute the date of the survey (April 3). The dashed line indicates the mean date of behavior change among viewers of each show. Panel B reports coefficient estimates from a regression of each respondent's reported date of behavioral change on indicators for whether the respondent watches *Tucker Carlson Tonight*, *Hannity*, or another Fox News show. These categories are not mutually exclusive — a significant number of viewers watch more than one Fox News show — and thus there is no omitted category.

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Figure 3: Residualized Hannity-Carlson viewership difference
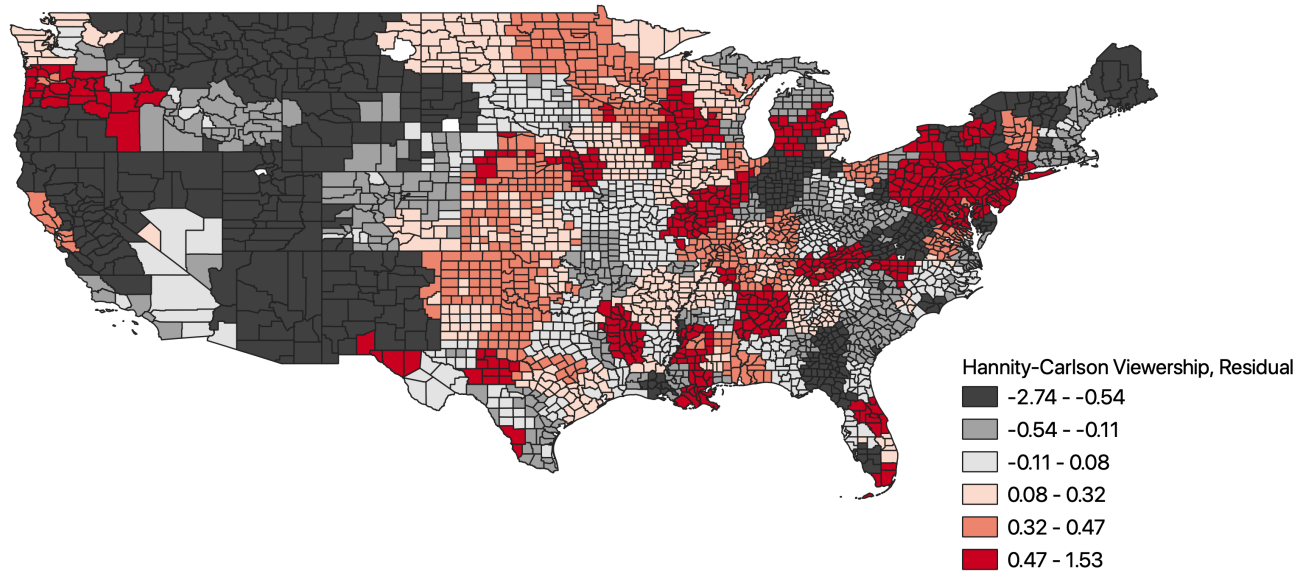
Notes: Figure 3 plots the difference in the viewership of *Hannity* and *Tucker Carlson Tonight* for each of the 207 DMAs in the continental United States, residualized by our base set of controls: the November 2018 and January 2020 market share of Fox News, the November 2018 market share of MSNBC, log total population, population density, the number of TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*.

Figure 4: OLS estimates of effect of differential viewership on cases and deaths
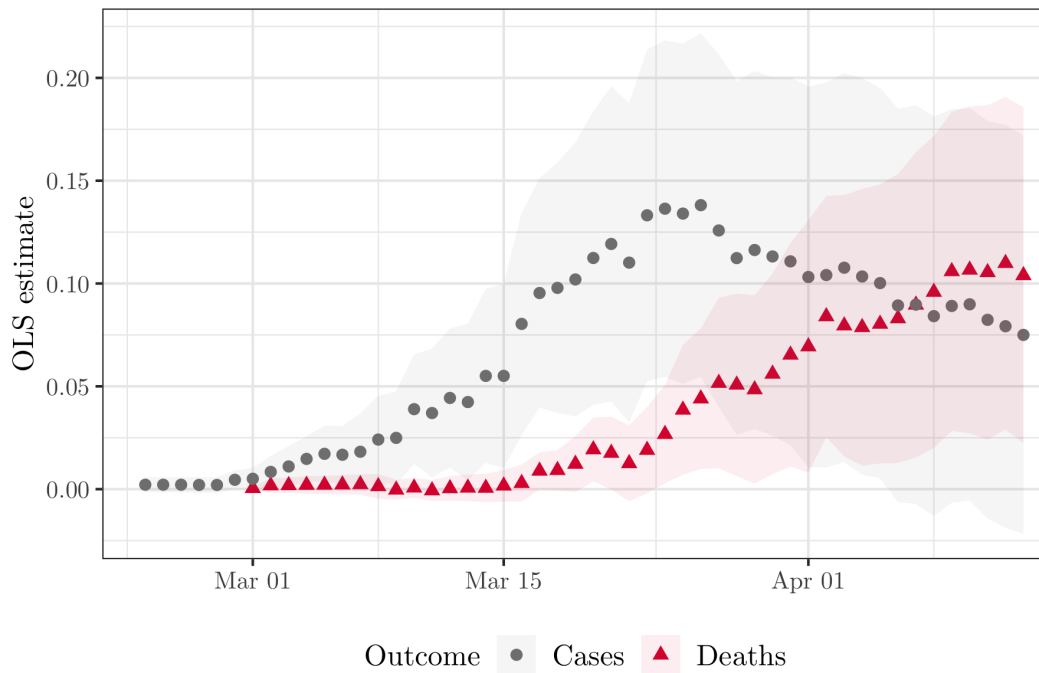
Notes: Figure 4 displays effects of differential viewership of *Hannity* and *Tucker Carlson Tonight* on log one plus cases and log one plus deaths. We report day-by-day results for the correlation between log deaths and log cases with the standardized viewership difference between *Hannity* and *Tucker Carlson Tonight*. All regressions are conditional on state fixed effects and a large set of controls: the November 2018 and January 2020 market share of Fox News, the November 2018 market share of MSNBC, log total population, population density, the number of TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. We cluster standard errors at the DMA level and report 95 percent confidence intervals.

Figure 5: OLS: robustness to combinations of controls

Panel A: Estimates on cases (March 14, 2020)
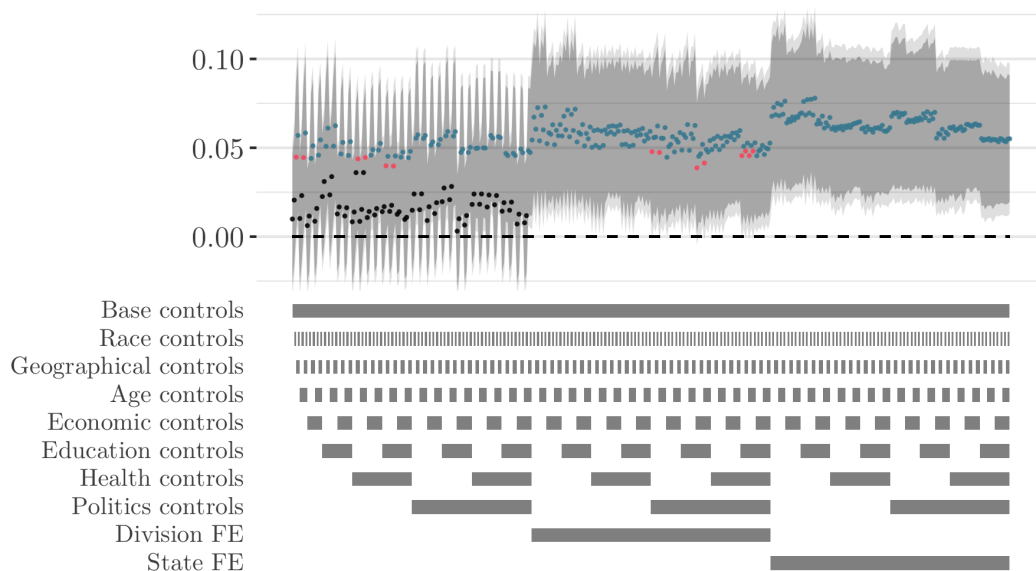
Panel B: Estimates on deaths (March 28, 2020)
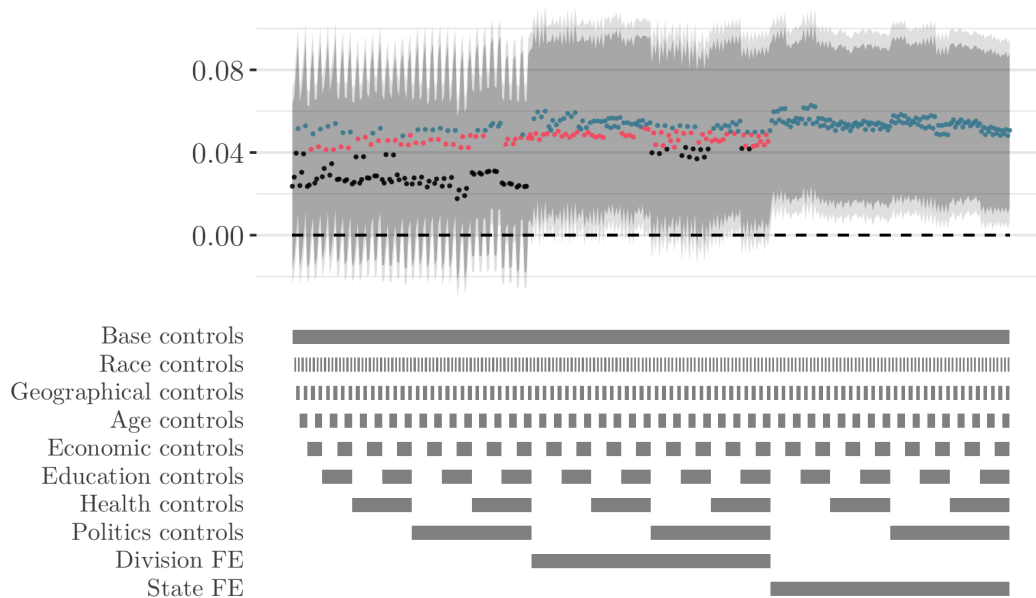
Notes: Figure 5 shows robustness of our OLS estimates for the specifications for log one plus cases on March 14 (Panel A) and log one plus deaths on March 28 (Panel B) under every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We cluster standard errors at the DMA level and report 90 percent and 95 percent confidence intervals for each model. Blue points are significant at the 5 percent level; red points are significant at the 10 percent level; black points are not significant at the 10 percent level.

Figure 6: Viewership and program start relative to sunset

Panel A: Across the country
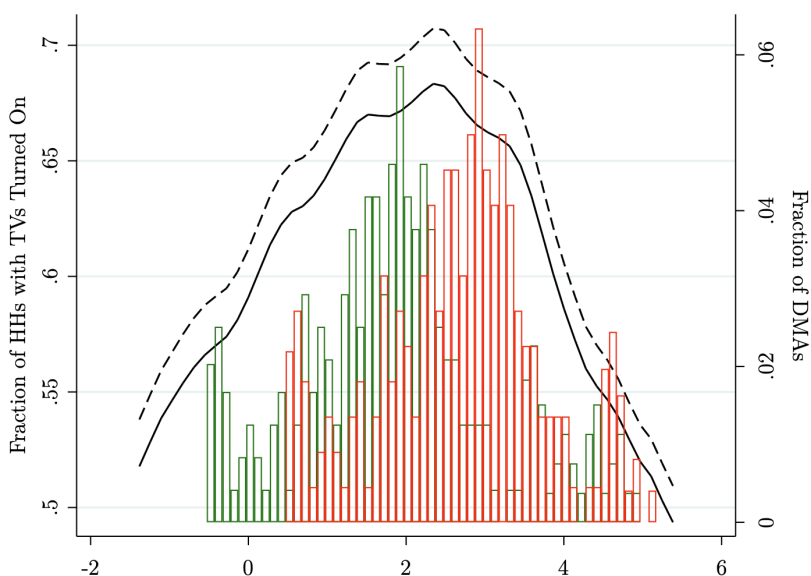
Panel B: By time zone
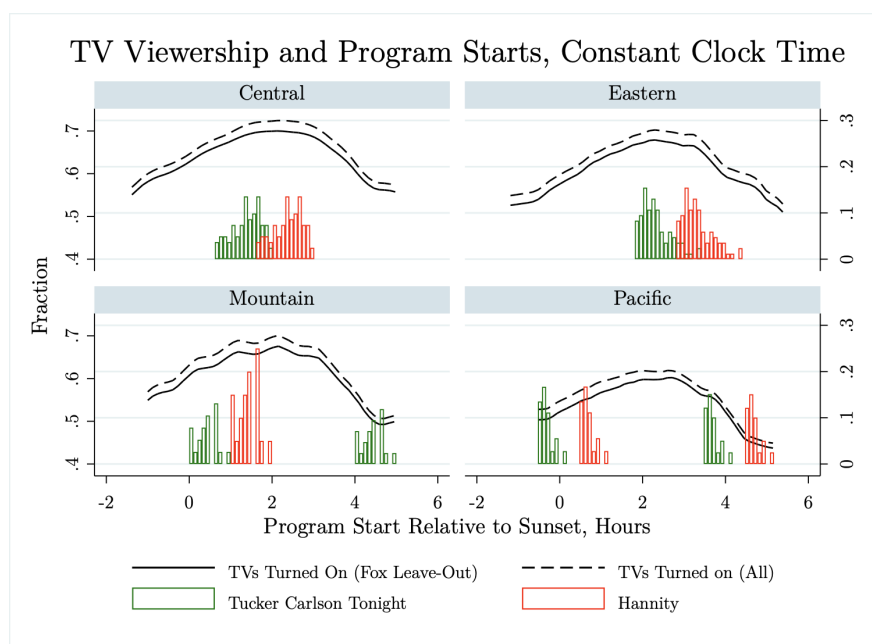
Notes: Panel A of Figure 6 plots a plots a non-parametric local polynomial fitting the relationship between time since sunset in a DMA and the fraction of households in that DMA with TVs turned on (solid line) and the relationship between time since sunset and the fraction of households with TVs turned on and tuned to non-Fox channels (dashed line). Panel A also shows a histogram depicting, at each twelve-minute interval relative to sunset, the number of DMAs in which *Tucker Carlson Tonight* begins in that interval (green) and in which *Hannity* begins in that interval (red). Episodes of *Tucker Carlson Tonight* and *Hannity* are generally re-run three hours after they first air, and because our data spans 5pm to 11pm, we observe repeats in more western time zones but not in Eastern Time. Panel B is similar, but plots the relationship and histogram separately for each of the four major time zones in the continental United States.

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Figure 7: Viewership and program start relative to sunset for 24 DMA

By DMA (random sample of 24)
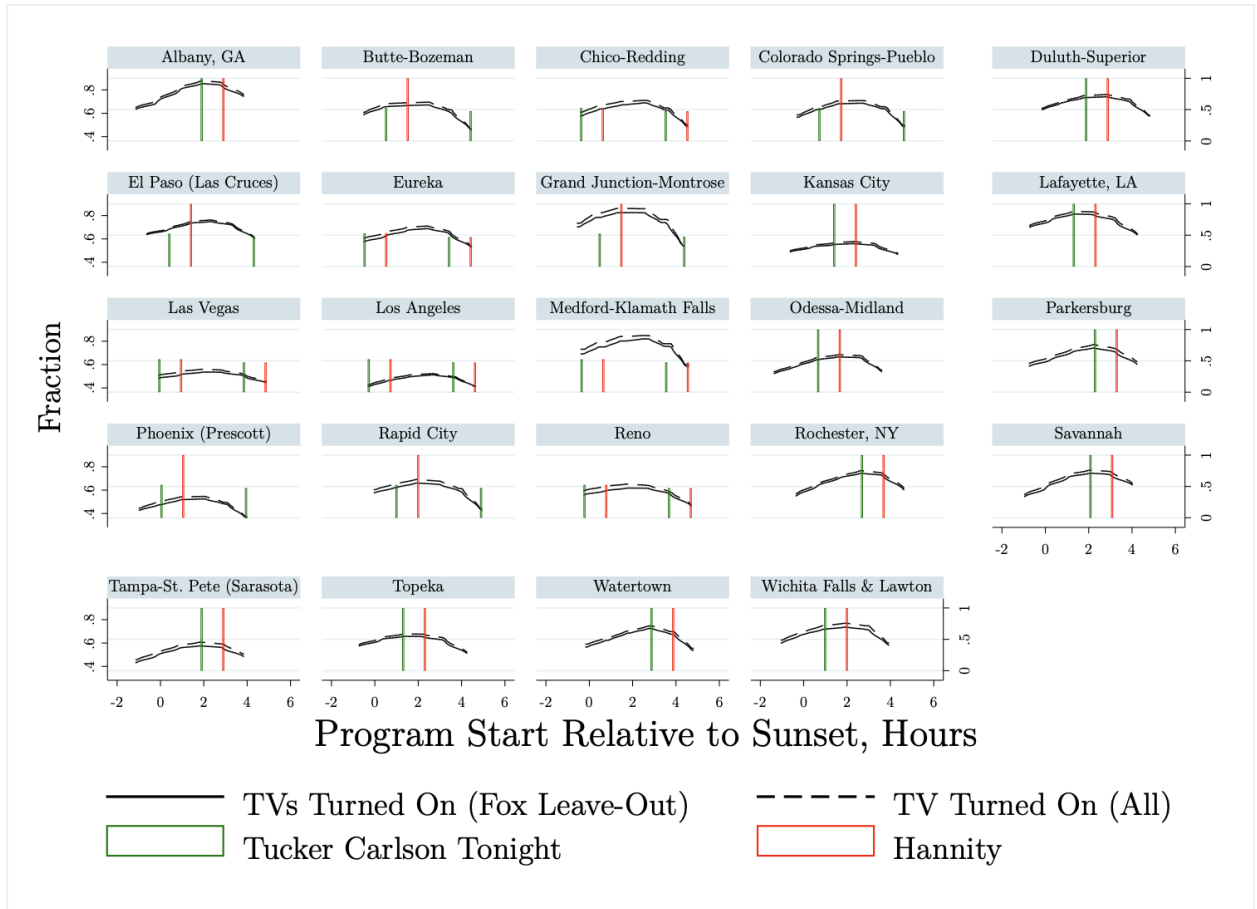
Notes: Figure 7 plots a non-parametric local polynomial fitting the relationship between time since sunset in a DMA and the fraction of households in that DMA with TVs turned on (dashed line) and the relationship between time since sunset and the fraction of households with TVs turned on and tuned to non-Fox channels (solid line). The figure plots the relationship separately for six randomly-selected DMAs within each time zone.

Figure 8: Instrument first stage on relative viewership
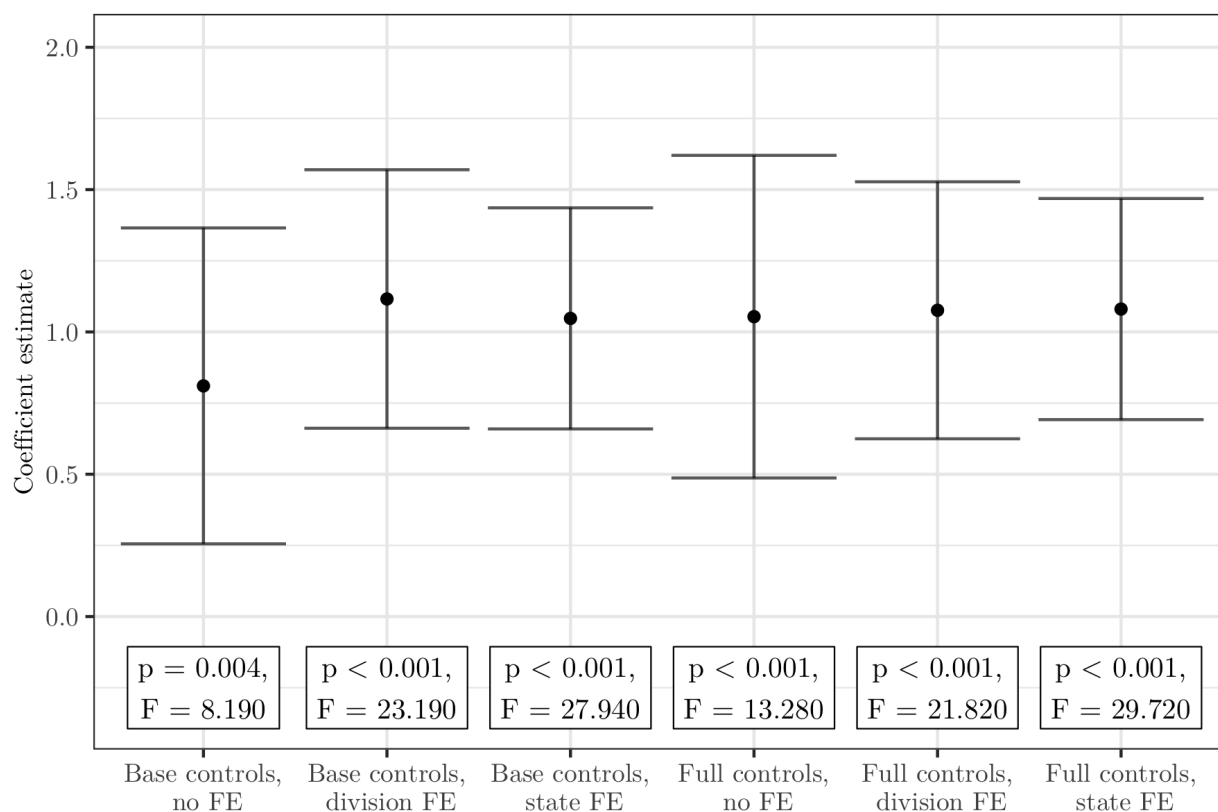
Notes: Figure 8 plots the coefficients from regressions of the standardized viewership difference between *Hannity* and *Tucker Carlson Tonight*, D_c, on our instrument, $\text{Non}\widehat{\text{FoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. "Base controls" include the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in 2018, Fox News' share of television in January 2020, the population density of the county, and the log of the county's total population. "Full controls" additionally include population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county from 2018, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. Robust standard errors are clustered at the DMA level. 95 percent confidence intervals are reported.

Figure 9: Residualized Hannity-Carlson instrument values
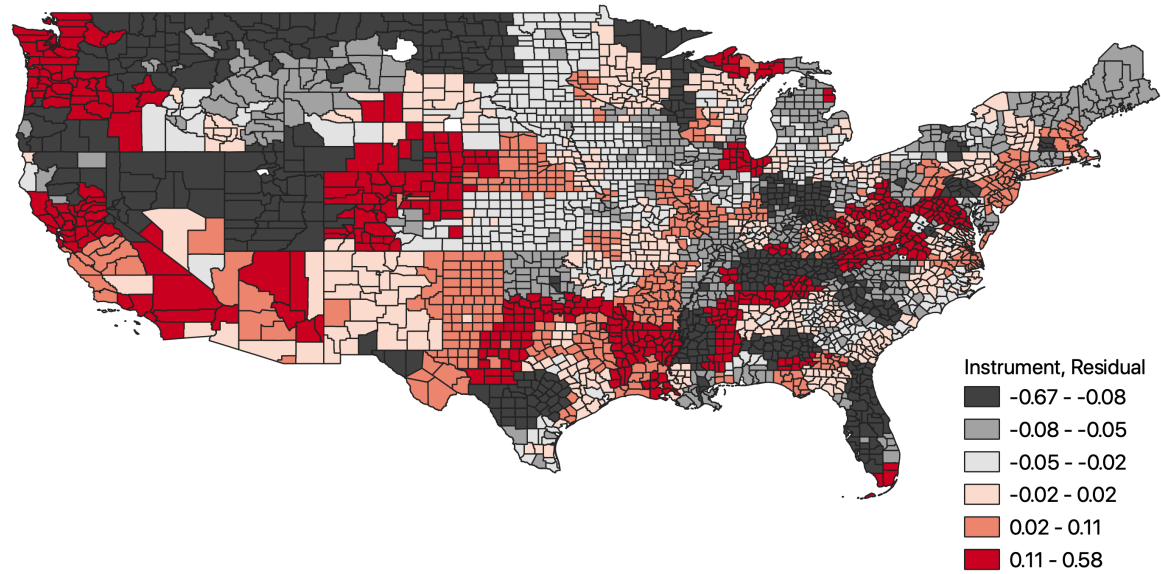
Notes: Figure 9 plots the values of our instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$, residualized by our minimum set of controls: Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the number of predicted TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*.

Figure 10: Reduced-form and 2SLS estimates of effect of differential viewership on cases and deaths
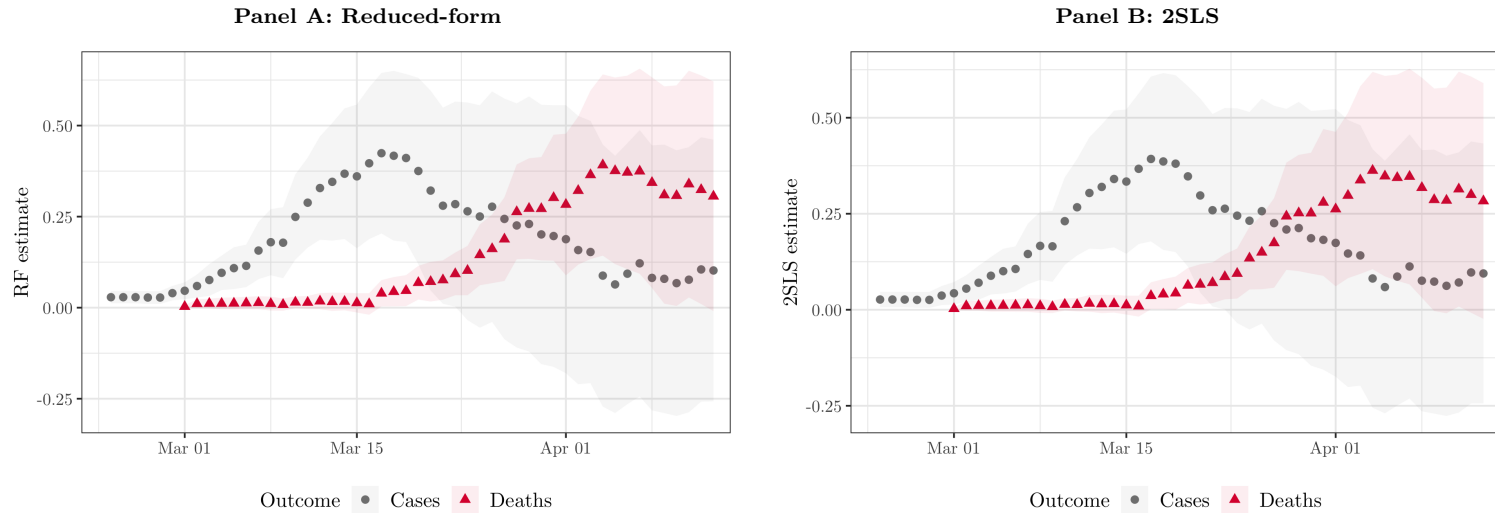
Notes: Figure 10 shows day-by-day reduced form (Panel A) and 2SLS (Panel B) estimates on log one plus cases and log one plus deaths. In Panel A, we report day-by-day effects of our instrument, $\text{Non}\widehat{\text{FoxHannity}}_d \times \text{FoxShare}_d$, on log deaths and log cases, conditional on state fixed effects and a large set of controls: Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the number of predicted TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. In Panel B, we report day-by-day effects of the standardized difference in viewership of *Hannity* vs. *Tucker Carlson Tonight*, instrumented by $\text{Non}\widehat{\text{FoxHannity}}_d \times \text{FoxShare}_d$ and controlling for state fixed effects and the same set of covariates as in Panel A. We cluster standard errors at the DMA level and report 95 percent confidence intervals.

Figure 11: 2SLS: robustness to combinations of controls

**Panel A: Estimates on cases (March 14, 2020)**


Panel B: Estimates on deaths (March 28, 2020)
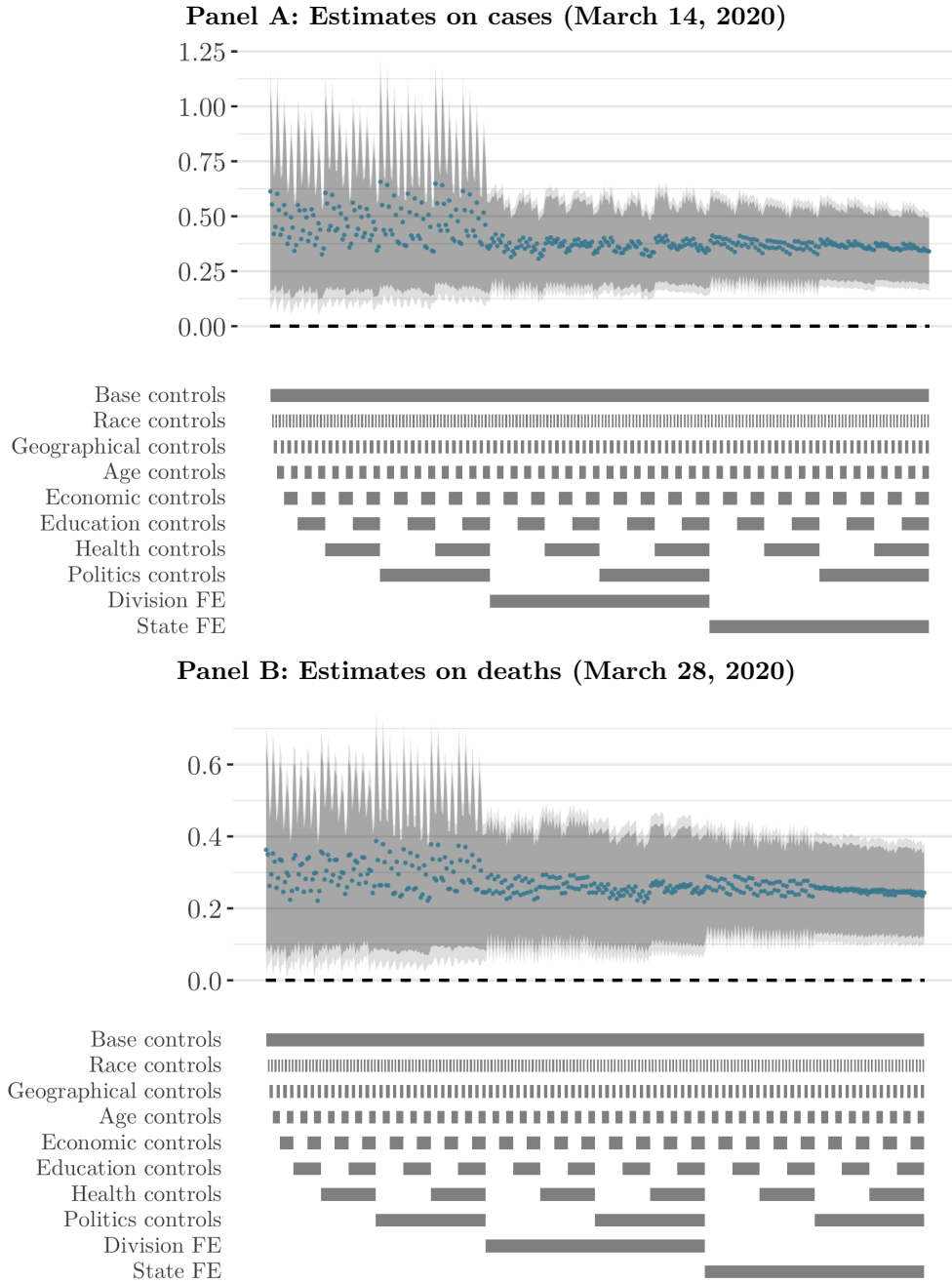
Notes: Figure 11 shows robustness of our two-stage least squares estimates for the specifications for log one plus cases on March 14 (Panel A) and log one plus deaths on March 28 (Panel B) under every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We cluster standard errors at the DMA level and report 90 percent and 95 percent confidence intervals for each model. Blue points are significant at the 5 percent level; red points are significant at the 10 percent level; black points are not significant at the 10 percent level.

Figure 12: Carlson-Hannity pandemic coverage gap and effects on cases and deaths
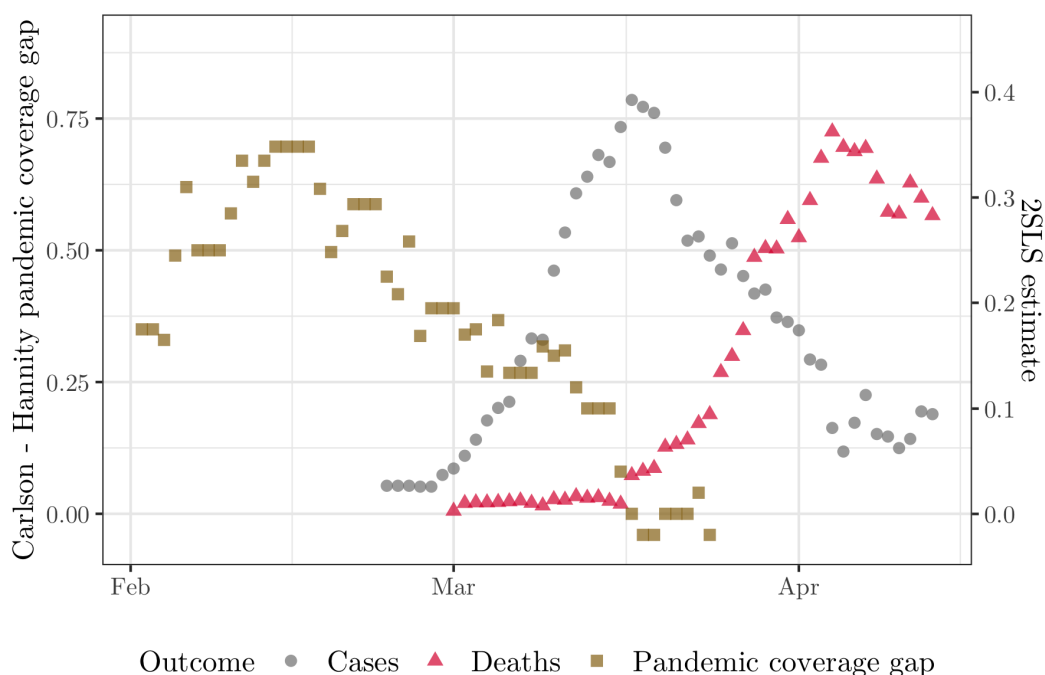
Notes: Figure 12 shows, in brown squares corresponding to the left *y*-axis, the difference in portrayed seriousness of the coronavirus threat on *Tucker Carlson Tonight* vs. *Hannity*, as rated by Amazon Mechanical Turk coders. The difference peaks in mid-February, a period during which there was no discussion of the coronavirus on *Hannity* and during which *Tucker Carlson Tonight* discussed the coronavirus virtually every show. The figure also shows, in gray circles and red triangles corresponding to the right *y*-axis, 2SLS estimates of the Hannity-Carlson viewership gap (instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$) on log one plus cases and log one plus deaths. All specifications control for state fixed effects, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016.

Figure 13: Implied COVID-19 curves

Panel A: Estimates on cases
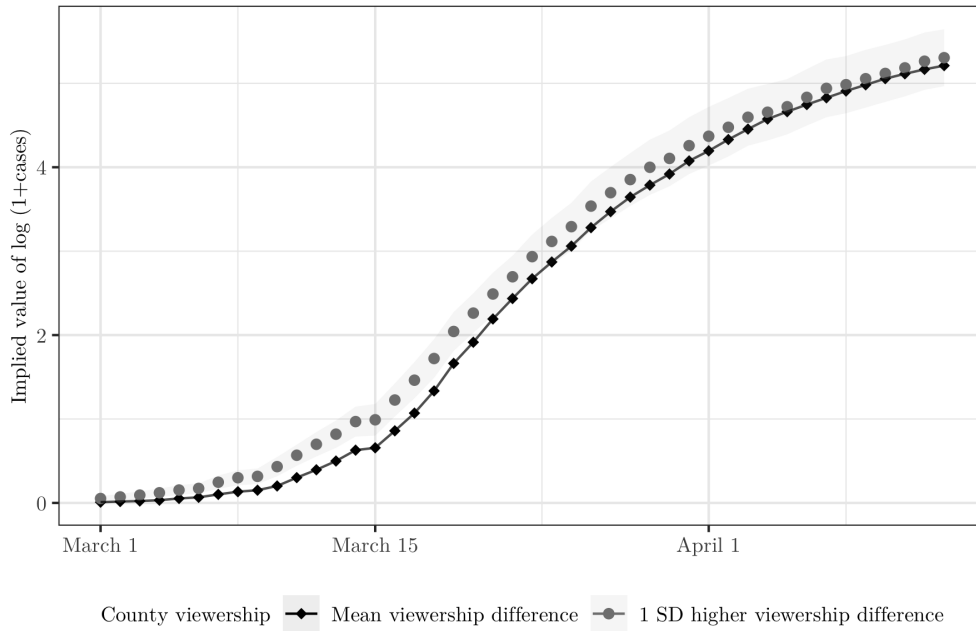
Panel B: Estimates on deaths
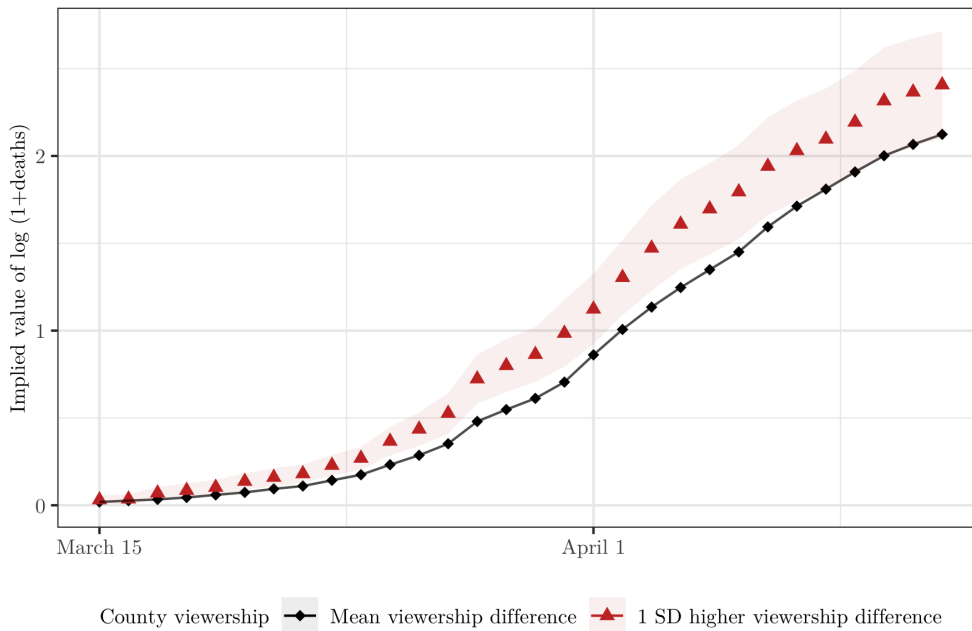
Notes: Panel A of Figure 13 plots, in black, the logarithm of (one plus the) mean number of cases in each day across all counties. In gray, the figure plots the the implied counterfactual values (based on our 2SLS estimates) for a county with a one standard deviation higher viewership difference between *Hannity* and *Tucker Carlson Tonight*. Panel B replicates Panel A, taking log one plus deaths as the outcome rather than log one plus cases. We report 95 percent confidence intervals on the counterfactual estimates. Standard errors are clustered at the DMA level.

Figure 14: 2SLS estimates of effect of the pandemic coverage index on cases and deaths
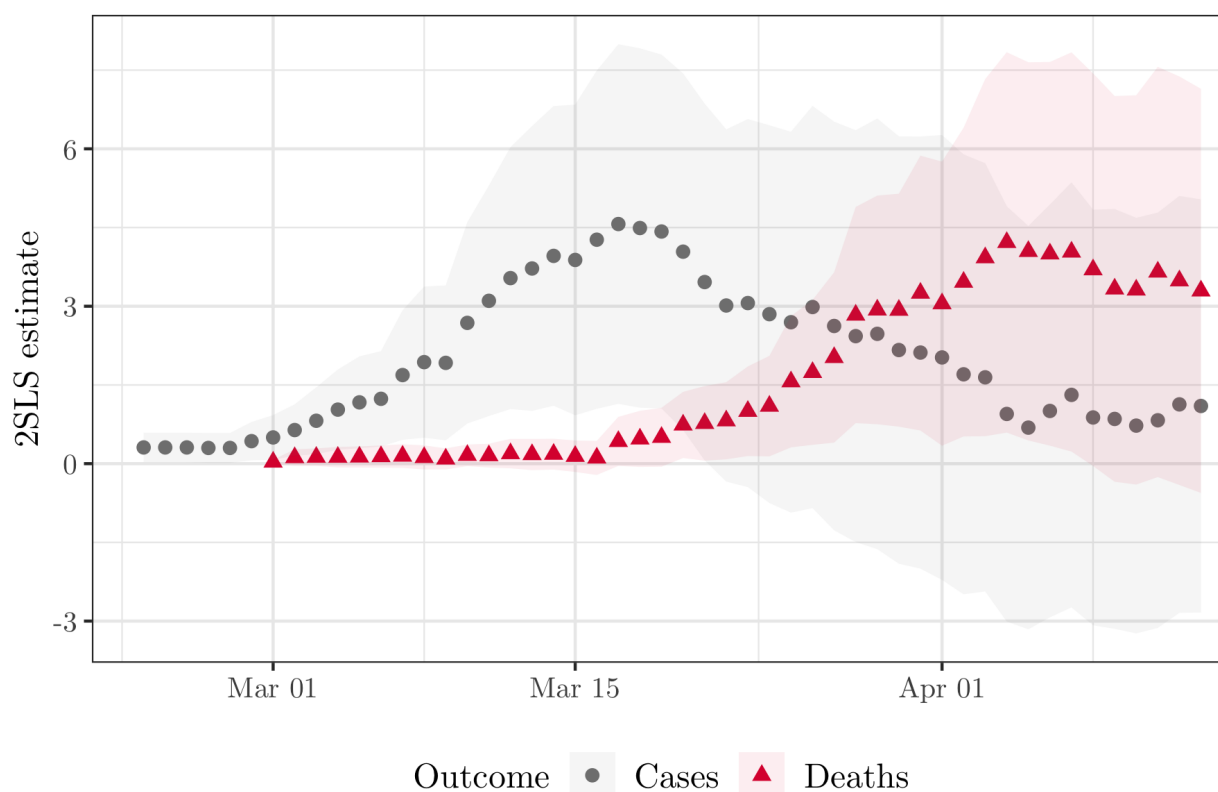
Notes: Figure 14 shows day-by-day 2SLS estimates from regressions of log one plus cases and log one plus deaths on the inverse of the pandemic coverage index described in Section 6, instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$. All specifications control for state fixed effects, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. We cluster standard errors at the DMA level and report 95 percent confidence intervals.

Tables

Table 1: Correlation between show viewership and timing of behavior change

	Dependent variable:			
	—	Changed before...		
	Change day	March 1	March 15	April 1
	(1)	(2)	(3)	(4)
Watches Hannity	5.001***	−0.128***	−0.082*	−0.054**
	(1.322)	(0.034)	(0.044)	(0.025)
Watches Carlson	−2.304*	0.088***	0.029	0.014
	(1.299)	(0.033)	(0.043)	(0.025)
Watches another Fox show	−1.463	0.046	0.003	0.0002
	(1.281)	(0.033)	(0.043)	(0.024)
p-value (Hannity=Carlson)	< 0.001	< 0.001	0.123	0.097
DV mean	39.016	0.163	0.680	0.922
Demographic controls	Yes	Yes	Yes	Yes
Other viewership controls	Yes	Yes	Yes	Yes
Observations	1,045	1,045	1,045	1,045
R^2	0.056	0.063	0.020	0.041

Notes: The dependent variable in Column 1 is the number of days after February 1, 2020 on which the respondent reported having significantly changed any of their behaviors in response to the coronavirus. For respondents who report not changing behavior by the date of the survey, we recode the dependent variable to the date of the survey (April 3). The dependent variables in Columns 2-4 are indicators for whether the respondent reported having significantly changed their behaviors before the date specified in the column header. Demographic controls include age, a white/not Hispanic indicator, a male indicator, a set of education indicators, and a set of household income indicators, and a set of employment indicators. Other viewership controls include indicators for whether the respondent watches CNN or MSNBC at least once a week. Robust standard errors are reported.

Table 2: Effect of differential viewership on cases

	Dependent variable:							
	COVID-19 cases							
	Feb 22 (1)	Feb 29 (2)	Mar 07 (3)	Mar 14 (4)	Mar 21 (5)	Mar 28 (6)	Apr 04 (7)	Apr 11 (8)
Panel A: *Ordinary least squares*								
Hannity-Carlson viewership difference	0.002	0.005**	0.018*	0.055**	0.119***	0.112**	0.103**	0.082*
	(0.002)	(0.002)	(0.010)	(0.022)	(0.039)	(0.044)	(0.049)	(0.049)
Panel B: *Reduced form*								
Non-Fox TVs on × Fox share	0.029***	0.040***	0.157***	0.368***	0.321**	0.226	0.088	0.077
	(0.008)	(0.010)	(0.040)	(0.091)	(0.140)	(0.171)	(0.183)	(0.186)
Panel C: *Two-stage least squares*								
H-C viewership difference (predicted)	0.027***	0.037***	0.145***	0.340***	0.298**	0.209	0.081	0.071
	(0.010)	(0.013)	(0.040)	(0.091)	(0.129)	(0.160)	(0.172)	(0.173)
Full controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102	3,102	3,102

Notes: The dependent variable is the log of one plus the cumulative number of COVID-19 cases in the county as of the date referenced in the column. Panel A reports OLS estimates of the log of one plus cases upon the standardized difference in Hannity-Carlson viewership. Panel B reports reduced-form estimates of the log of one plus cases upon the instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight.*. Panel C reports two-stage least squares estimates of the log of one plus cases upon the standardized difference in Hannity-Carlson viewership, instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$. OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, MSNBC's share of cable in January 2018, population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. IV controls are identical to OLS controls, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Table 3: Effect of differential viewership on deaths

	Dependent variable:						
	COVID-19 deaths						
	Feb 29 (1)	Mar 07 (2)	Mar 14 (3)	Mar 21 (4)	Mar 28 (5)	Apr 04 (6)	Apr 11 (7)
Panel A: *Ordinary least squares*							
Hannity-Carlson viewership difference	0.0004 (0.0005)	0.002 (0.003)	0.001 (0.004)	0.018* (0.009)	0.051** (0.023)	0.079** (0.034)	0.105** (0.041)
Panel B: *Reduced form*							
Non-Fox TVs on × Fox share	0.003* (0.002)	0.013 (0.009)	0.017 (0.012)	0.071** (0.028)	0.263*** (0.066)	0.392*** (0.127)	0.339** (0.159)
Panel C: *Two-stage least squares*							
H-C viewership difference (predicted)	0.003 (0.002)	0.012 (0.009)	0.016 (0.012)	0.066** (0.027)	0.244*** (0.071)	0.363*** (0.131)	0.314** (0.156)
Full controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102	3,102

Notes: The dependent variable is the log of one plus the cumulative number of COVID-19 deaths in the county as of the date referenced in the column. Panel A reports OLS estimates of the log of one plus deaths upon the standardized difference in Hannity-Carlson viewership. Panel B reports reduced-form estimates of the log of one plus deaths upon the instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*. Panel C reports two-stage least squares estimates of the log of one plus deaths upon the standardized difference in Hannity-Carlson viewership, instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$. OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, MSNBC's share of cable in January 2018, population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. IV controls are identical to OLS controls, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Table 4: Differential coverage and COVID-19 outcomes across all Fox News evening shows

	Dependent variable:					
					Cases Mar 14	Deaths Mar 28
	Inverse pandemic coverage index					
	(1)	(2)	(3)	(4)	(5)	(6)

Panel A: *OLS: inverse pandemic coverage index on relative viewership*

H-C viewership difference	0.129***	0.129***				
	(0.008)	(0.008)				

Panel B: *RF: inverse pandemic coverage index on instrument*

$\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$			0.089***	0.093***		
			(0.031)	(0.031)		

Panel C: *2SLS: cases and deaths on inverse predicted pandemic coverage index*

$-1\times$ coverage index (predicted)					3.960***	2.833***
					(1.456)	(1.051)

Base controls	Yes	Yes	Yes	Yes	Yes	Yes
Main controls	No	Yes	No	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102

Notes: Panel A reports OLS estimates of the (inverse of the) pandemic coverage index on the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*. Panel B reports reduced-form estimates of the inverse pandemic coverage index on our instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*. Columns (5) and (6) in Panel C report 2SLS estimates of the log of one plus the number of cases on March 14 and the log of one plus the number of deaths on March 28, respectively, on the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*, instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$. Base OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, and the log of the county's total population. Base controls for the reduced form and the two-stage least squares are identical, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Main controls for both OLS and IV include population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Supplementary Appendix: not for publication

Our supplementary material is organized as follows. In Appendix A, we report appendix figures and tables referenced in the main body of the text. In Appendix B, we report versions of the figures and tables included in the main text, but using the alternative instrument described in Section 5.3.4. In Appendix C, we report versions of the figures and tables included in the main text, but with cases and deaths transformed by the inverse hyperbolic sine rather than the natural logarithm. In Appendix D, we include a copy of the survey instrument described in Section 3.

A   Appendix Tables and Figures

A.1   Survey

Table A1: Sample representativeness

Variables:	Survey	Gallup
Male	0.57	0.50
Age	65.16	68.80
Race: White	0.95	0.94
At least high school degree	0.99	0.96
At least some college education	0.80	0.67
Employed full-time	0.26	0.27
Annual household income (USD)	70657.09	60299.89
Observations	1480	12932

Notes: Summary statistics of Republicans aged 55 and above from the survey and the 2015 Gallup microdata.

A.2 Data and OLS

Figure A1: Rating persistence between early and late January
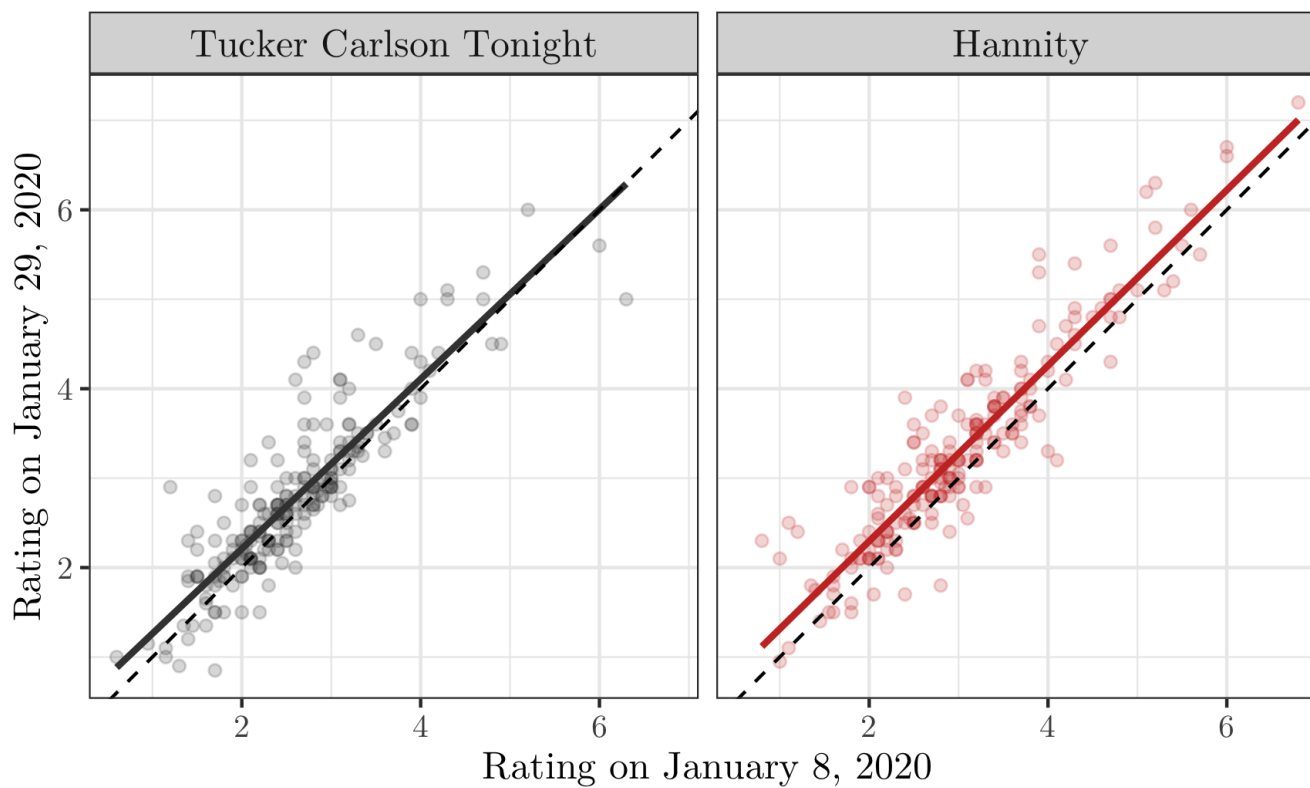
Notes: Figure A1 plots, separately for *Hannity* and *Tucker Carlson Tonight*, the rating in each DMA on Wednesday, January 29, 2020 (the last day for which we have data) and on Wednesday, January 8, 2020 (three weeks prior). The dotted line is the 45-degree line indicating equal ratings across the two dates.

Figure A2: Selection into watching Hannity versus Carlson
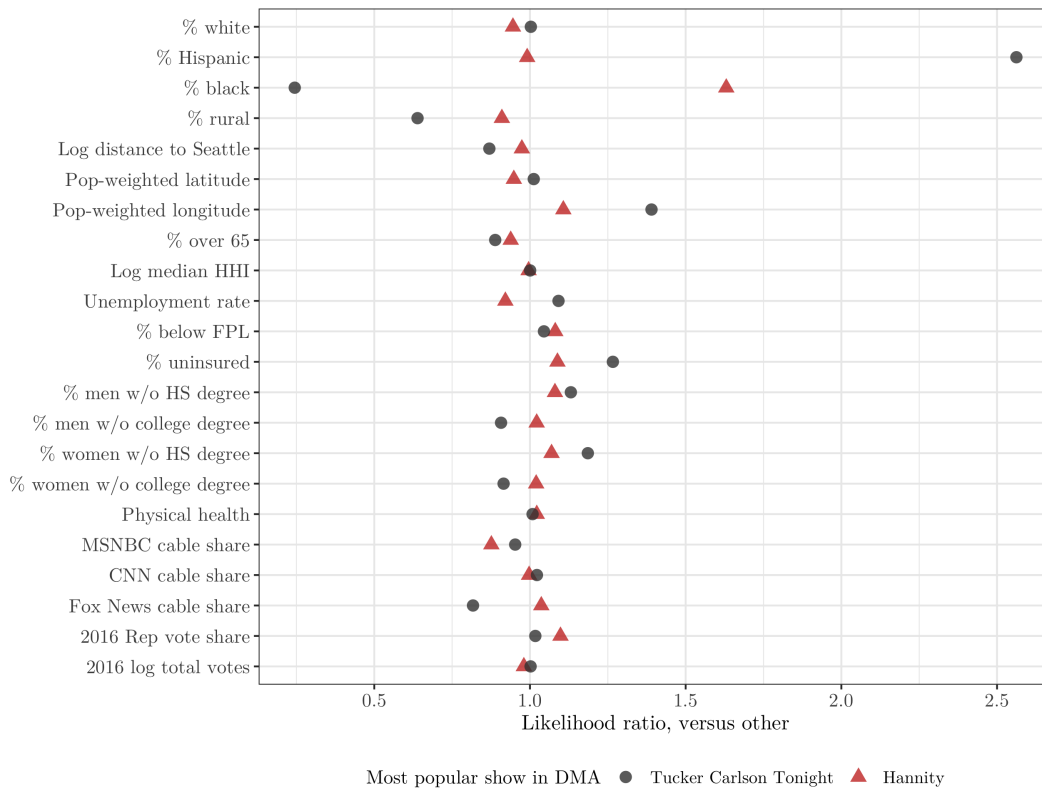
Notes: For each demographic characteristic, Figure A2 shows, in blue, ratios of the average value among counties in which *Hannity* is the most popular show relative to the average value among counties in which neither *Hannity* nor *Tucker Carlson Tonight* is the most popular show. Similarly, Figure A2 shows, in red, ratios of the average value among counties in which *Tucker Carlson Tonight* is the most popular show relative to the average value among counties in which neither *Hannity* nor *Tucker Carlson Tonight* is the most popular show.

Figure A3: OLS: R^2 vs. coefficient estimates under combinations of controls

Panel A: Estimates on log cases (March 14, 2020)

Panel B: Estimates on log deaths (March 28, 2020)
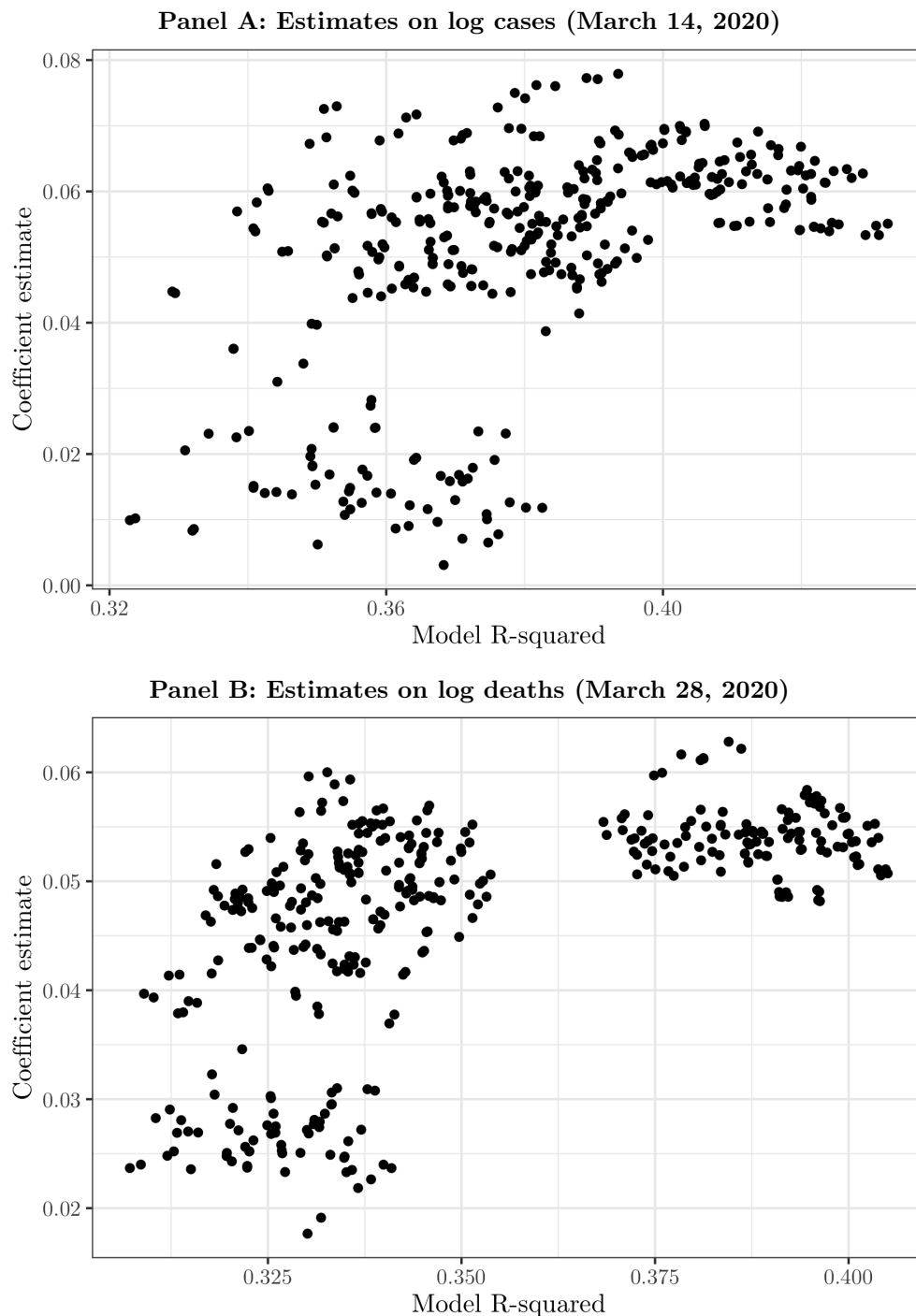
Notes: Figure A3 shows the relationship between the OLS coefficient estimates (y-axis) and the model R^2 (x-axis) for log cases on March 14 (Panel A) and for log deaths on March 28 (Panel B) from specifications with every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We cluster standard errors at the DMA level.

Figure A4: OLS: residual-residual plot

Panel A: Estimates on log cases (March 14, 2020)
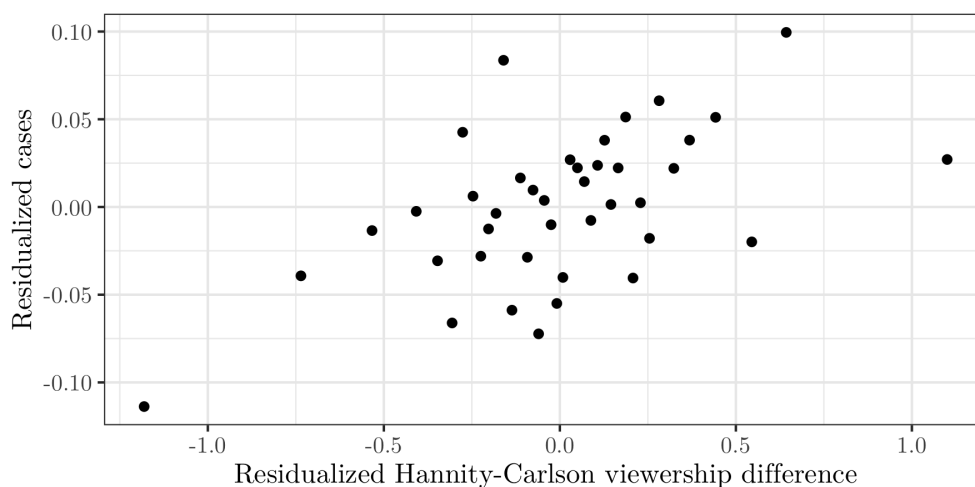
Panel B: Estimates on log deaths (March 28, 2020)
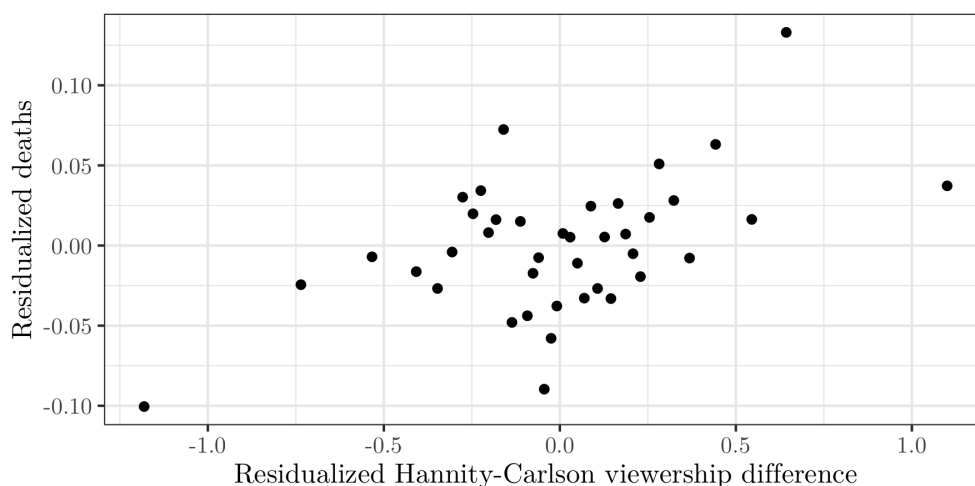
Notes: Figure A4 displays a binscatter of the residuals of log one plus cases (Panel A) and log one plus deaths (Panel B) on the residuals of the standardized difference in viewership, where both outcome variables and the standardized difference in viewership are residualized by state fixed effects and our full set of controls: Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016.

A.3 Construction of Instrument

Figure A5: Sunset time on February 1, 2020 by county
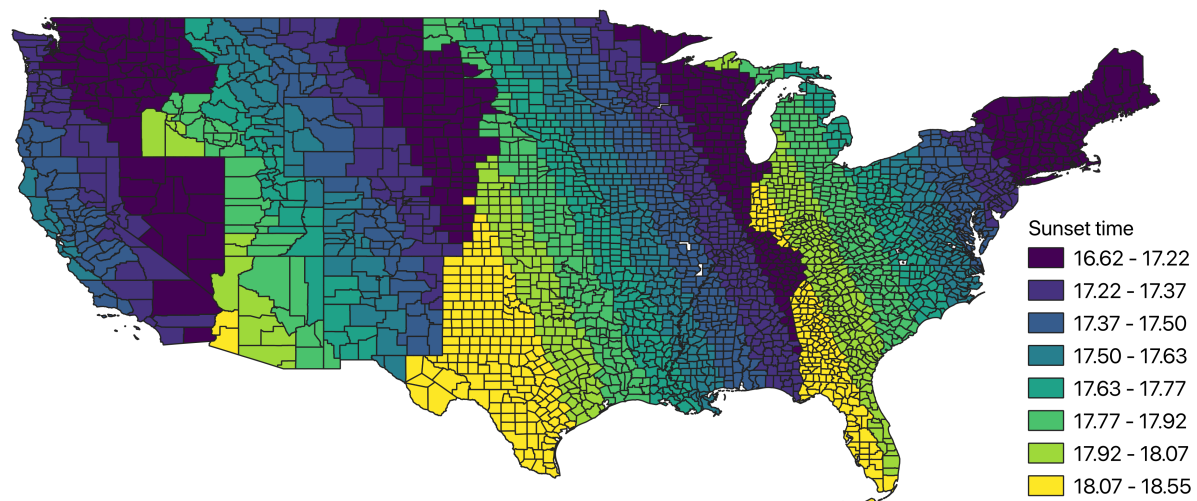
Notes: Map plots the time of sunset on February 1, 2020 for each county in the continental United States. Data from `www.timeanddate.com`.

Figure A6: Predicted number of TVs turned on during *Hannity*, leaving out TVs watching *Hannity*
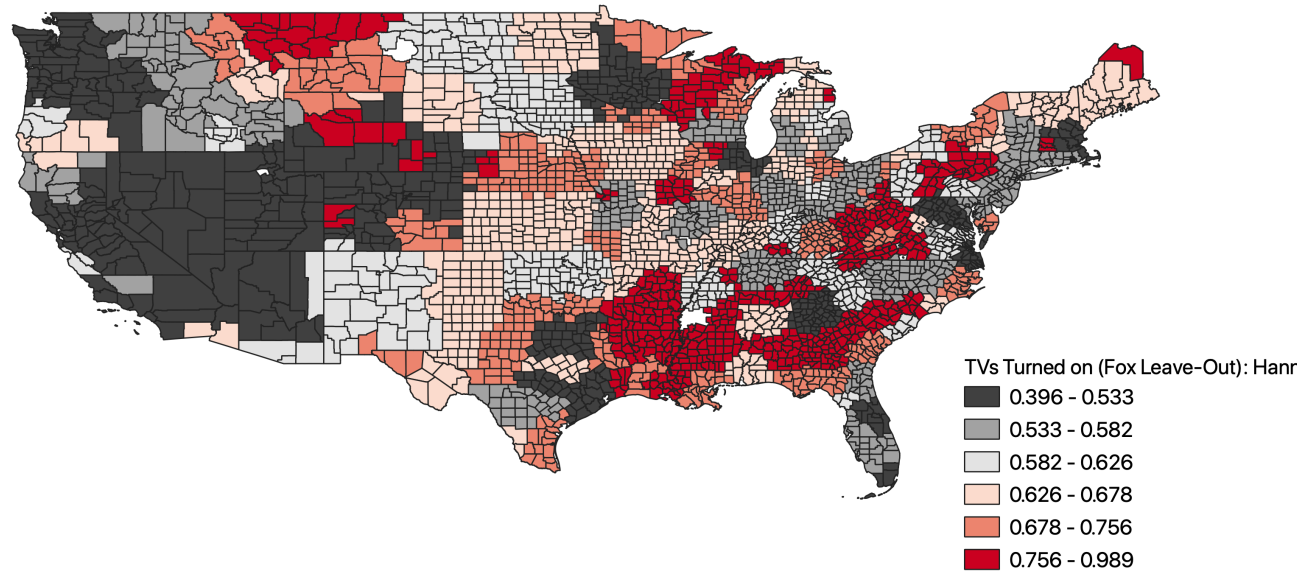
Notes: For each of the 207 DMAs in the continental United States, Figure A6 plots the predicted number of TVs turned on and tuned to non-Fox channels (i.e. TVs that are turned on and not watching Hannity) during the timeslot when *Hannity* airs, 9PM Eastern Time.

Figure A7: Fox News viewership share, leaving out *Hannity* and *Tucker Carlson Tonight*
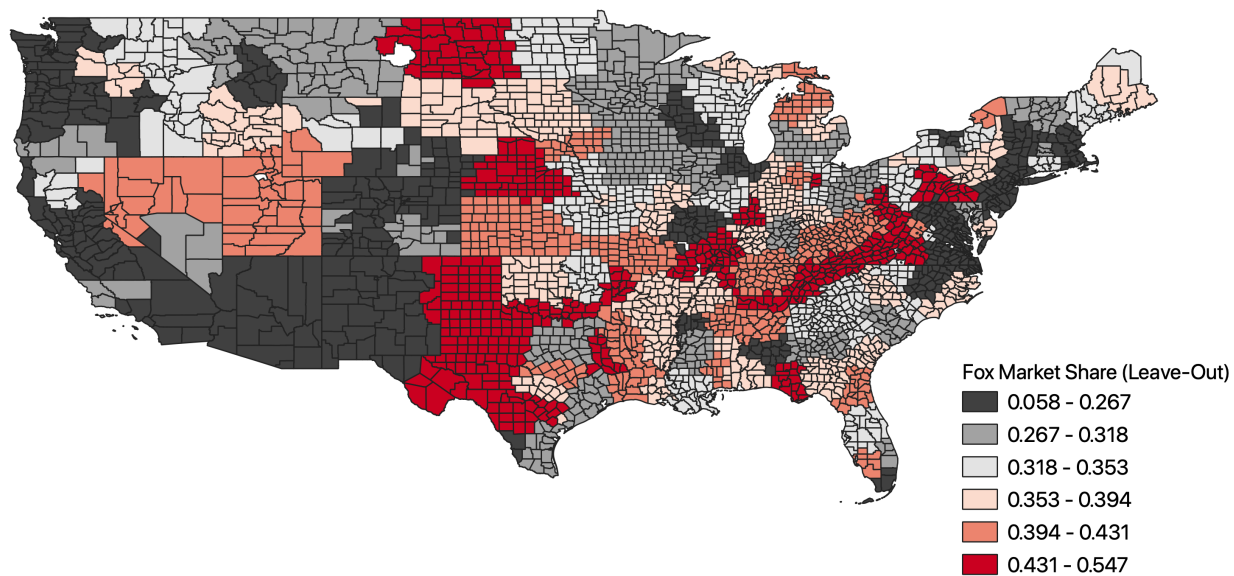
Notes: For each of the 207 DMAs in the continental United States, Figure A7 plots the market share of Fox News in January 2020, leaving out viewership of *Hannity* and *Tucker Carlson Tonight*.

A.4 Instrument Exclusion, First Stage, and Robustness

Figure A8: Instrument correlation with county-level demographics
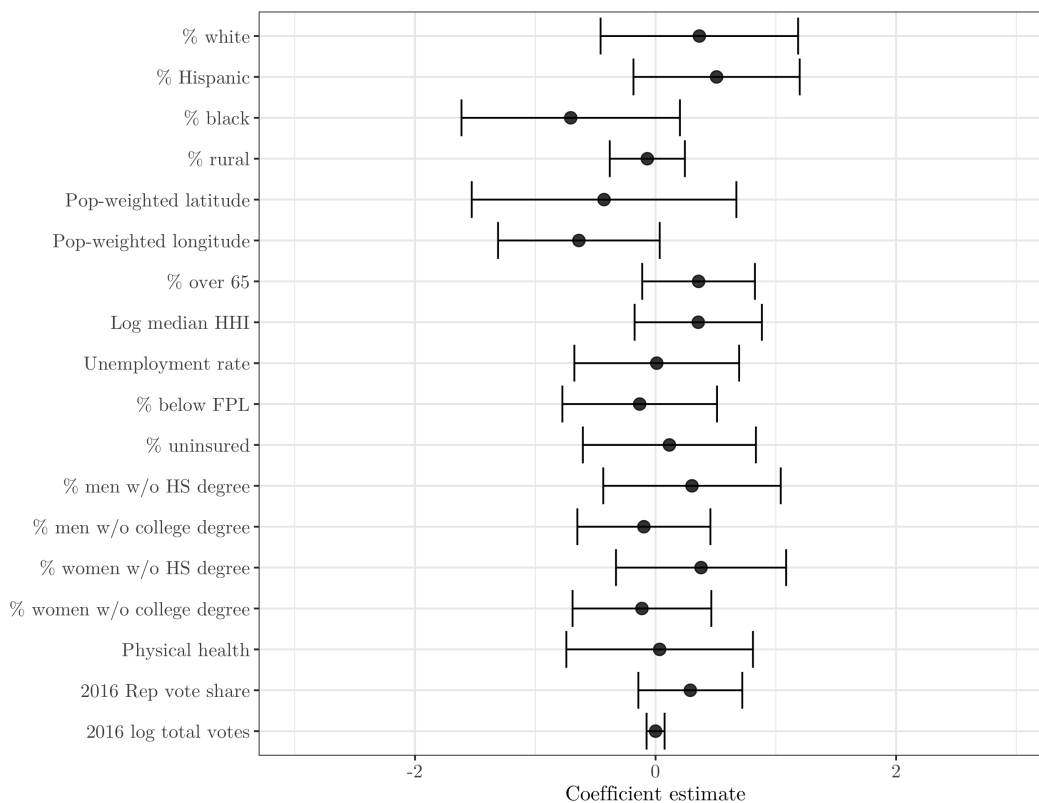
Figure A9: Instrument correlation with local health system capacity
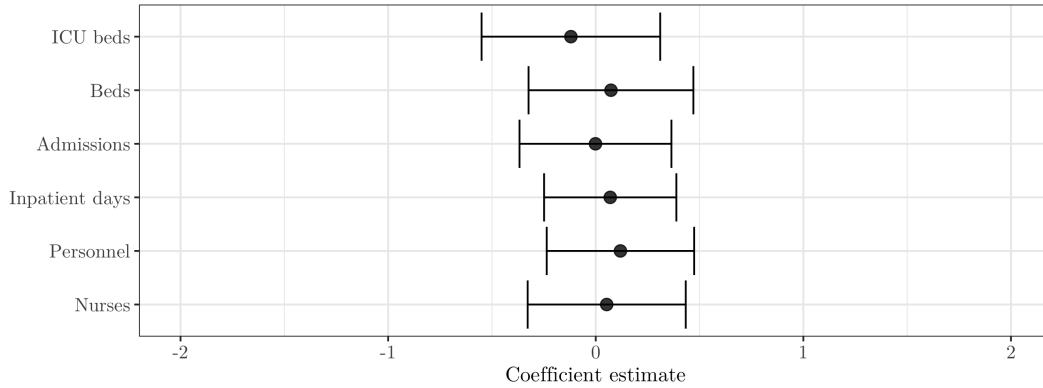
Notes: Figure A9 shows the coefficients from a series of regressions of each proxy for health system capacity on our instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$, conditional on the two interactants, $\widehat{\text{NonFoxHannity}}_d$ and FoxShare_d, and a small set of other controls accounting for local viewership patterns (the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the local viewership share of MSNBC, and population size and density). All dependent variables are in per capita terms and are scaled to a standard normal distribution. We cluster standard errors at the DMA level and report 95 percent confidence intervals.

Table A2: First-stage regressions

	Dependent variable:					
	Difference in Hannity-Carlson viewership					
	(1)	(2)	(3)	(4)	(5)	(6)
Non-Fox TVs on $\times$ Fox share	0.810***	1.116***	1.048***	1.054***	1.076***	1.080***
	(0.283)	(0.232)	(0.198)	(0.289)	(0.230)	(0.198)
F-statistic	8.190	23.190	27.940	13.280	21.820	29.720
Controls	Base	Base	Base	All	All	All
Fixed effects	None	Division	State	None	Division	State
Observations	3,103	3,103	3,103	3,102	3,102	3,102
R^2	0.694	0.828	0.864	0.756	0.835	0.869

Notes: Table reports regressions of the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight* on our instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. "Base controls" include the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, and the log of the county's total population. "All controls" additionally include population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Figure A10: IV: residual-residual plot

**Panel A: Estimates on log cases (March 14, 2020)**
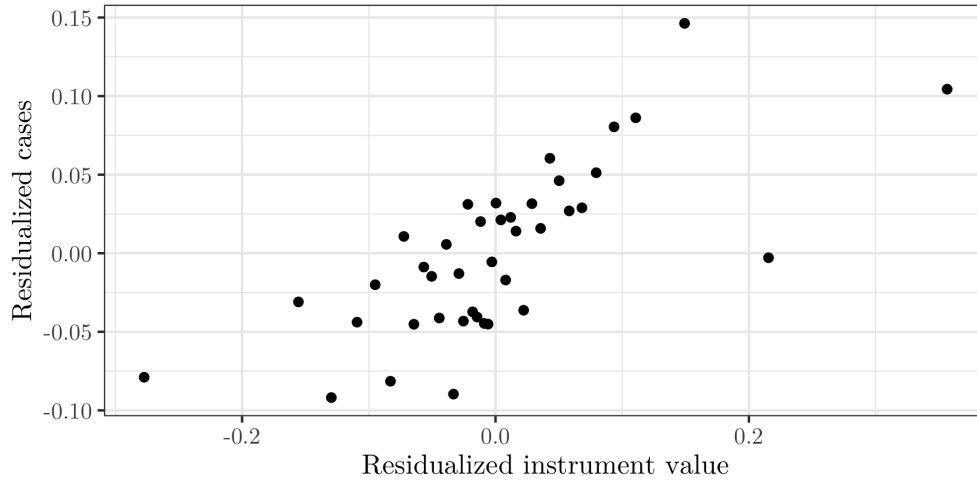
Panel B: Estimates on log deaths (March 28, 2020)
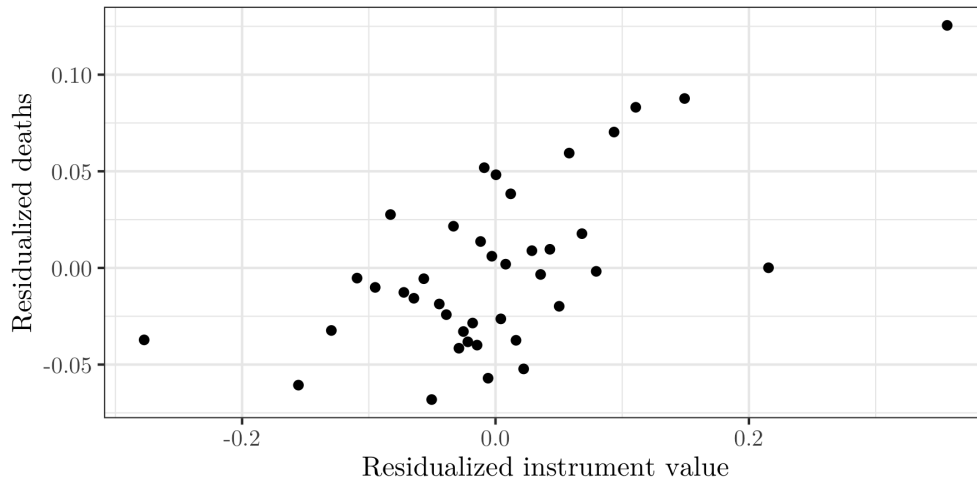
Notes: Figure A10 displays a binscatter of the residuals of log one plus cases (Panel A) and log one plus deaths (Panel B) on the residuals of $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$, where both outcome variables and the instrument are residualized by state fixed effects and our full set of controls: Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, an age-adjusted measure of the average physical health in the county from 2018, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016.

A.5 Effect sizes

Figure A11: Implied COVID-19 curves (OLS)

Panel A: Estimates on cases

County viewership ◆ Mean viewership difference ● 1 SD higher viewership difference

Panel B: Estimates on deaths

County viewership ◆ Mean viewership difference ▲ 1 SD higher viewership difference
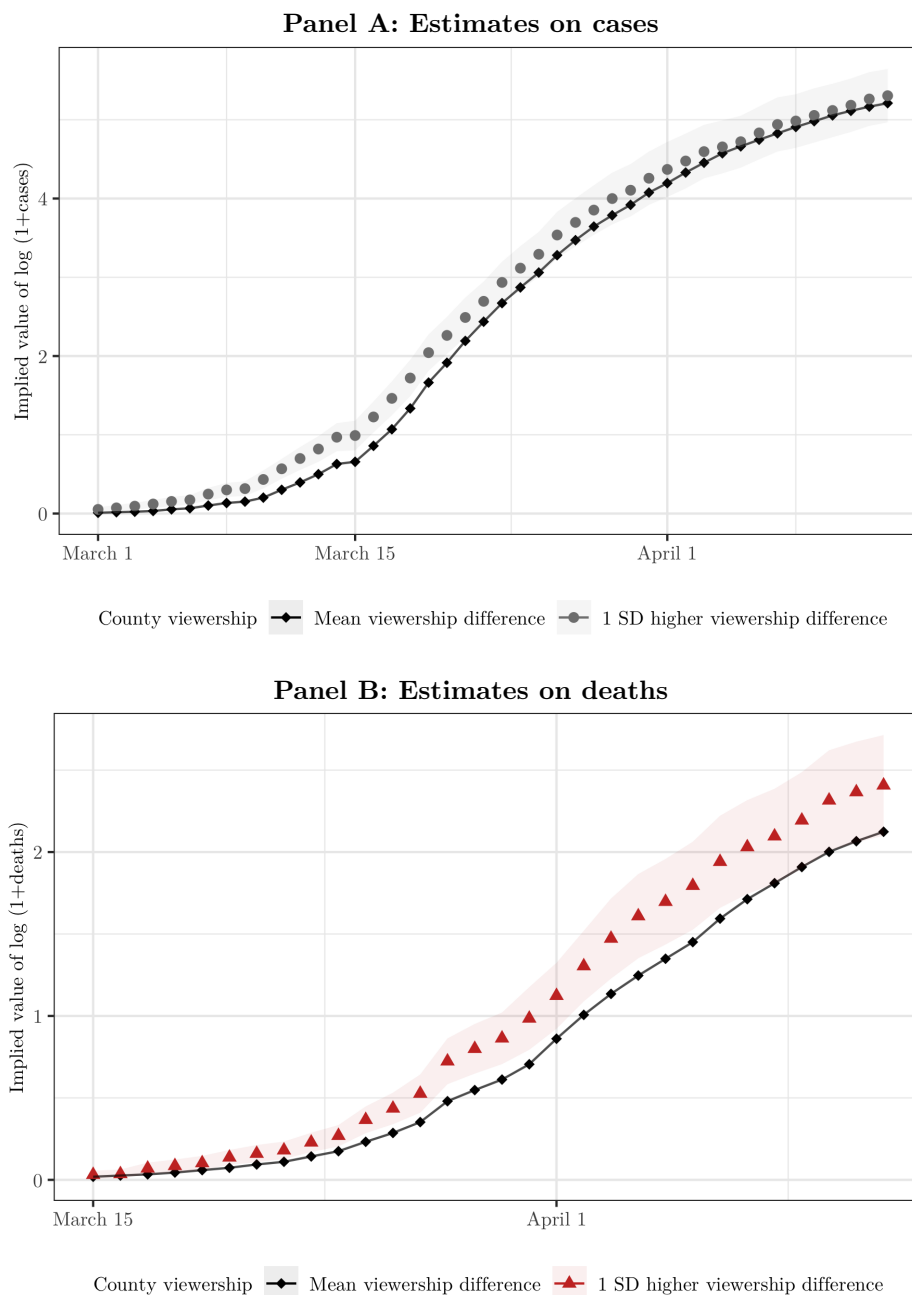
Notes: Panel A of Figure A11 plots, in black, the logarithm of (one plus the) mean number of cases in each day across all counties. In gray, the figure plots the the implied counterfactual values (based on our OLS estimates) for a county with a one standard deviation higher viewership difference between *Hannity* and *Tucker Carlson Tonight*. Panel B replicates Panel A, taking log one plus deaths as the outcome rather than log one plus cases. We report 95 percent confidence intervals on the counterfactual estimates. Standard errors are clustered at the DMA level.

B Robustness Check: Non-Fox TV instrument

Figure B1: Instrument first stage on relative viewership
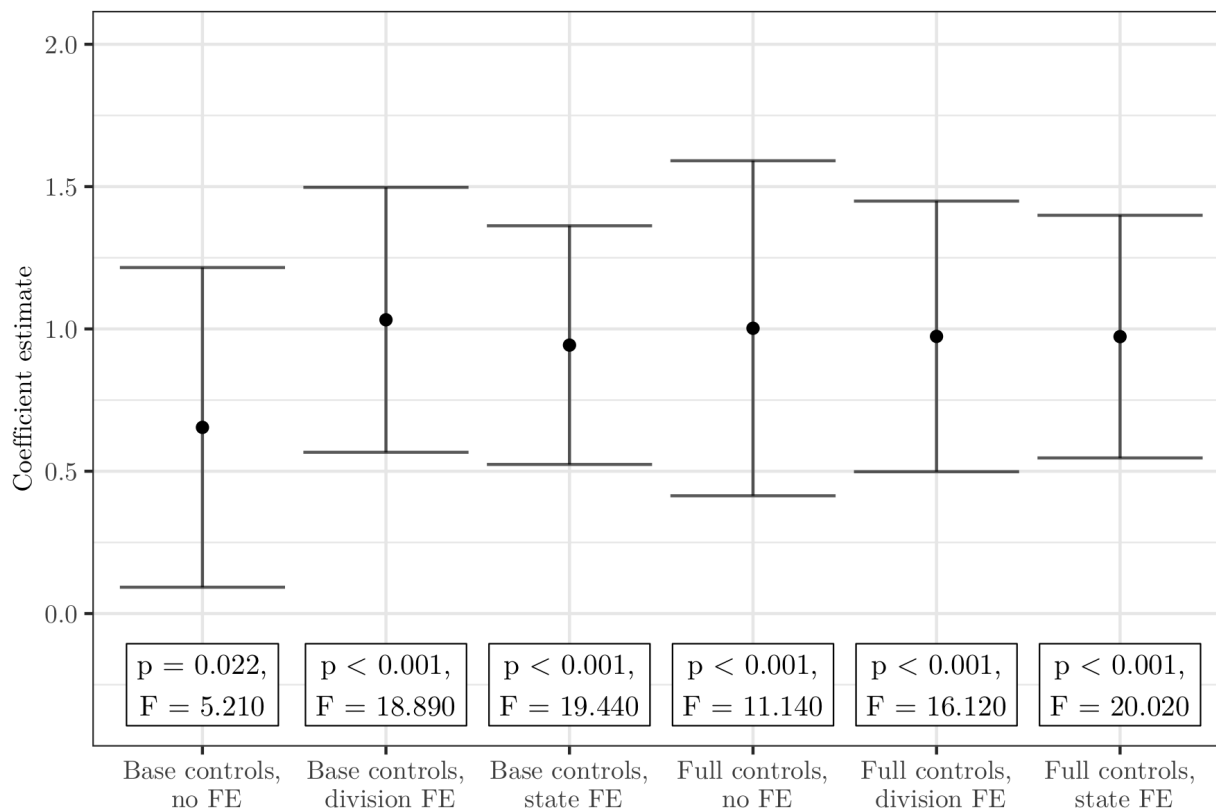
Notes: Figure B1 plots the coefficients from regressions of the standardized viewership difference between *Hannity* and *Tucker Carlson Tonight*, D_c, on our instrument, NonFoxHannity$_d$ × FoxShare$_d$ — that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight.*. "Base controls" include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in 2018, Fox News' share of television in January 2020, the population density of the county, and the log of the county's total population. "Full controls" additionally include population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. Robust standard errors are clustered at the DMA level. 95% confidence intervals are reported.

Figure B2: Instrument correlation with county-level demographics
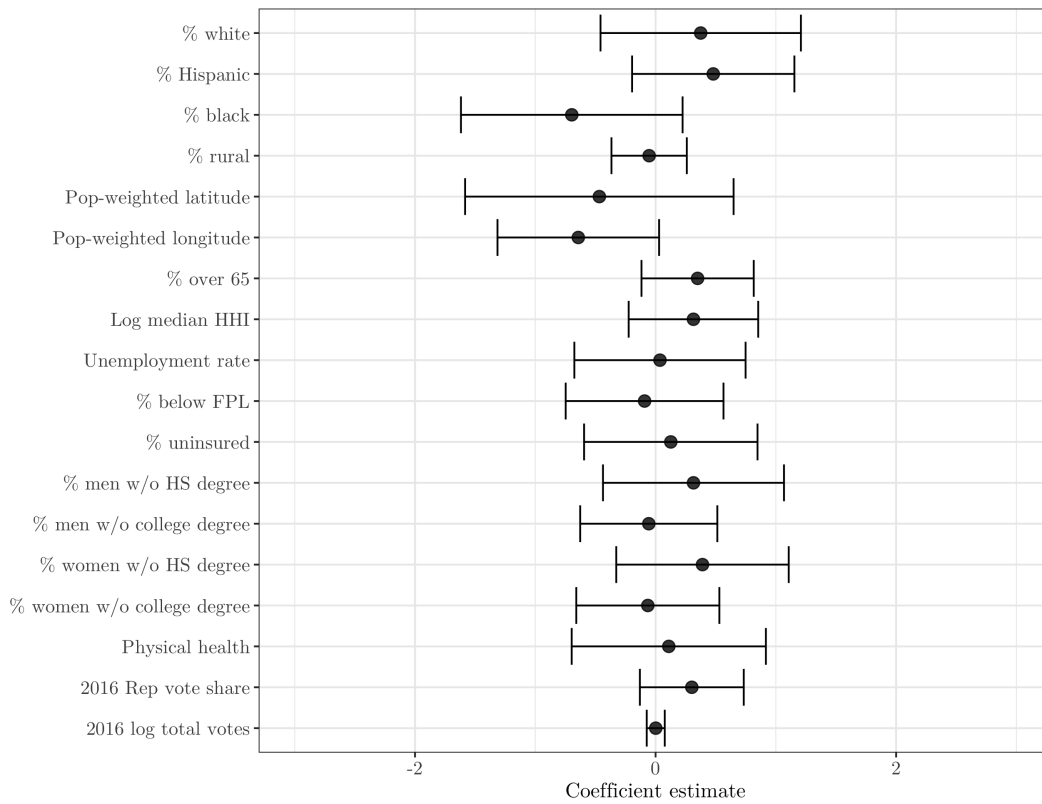
Notes: Figure B2 shows the coefficients from a series of regressions of each demographic characteristic on our instrument, $\mathrm{NonFoxHannity}_d \times \mathrm{FoxShare}_d$ — that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight* — conditional on the two interactants and a small set of other controls accounting for local viewership patterns (the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the local viewership share of MSNBC, and population size and density). All dependent variables are scaled to a standard normal distribution. We cluster standard errors at the DMA level and report 95% confidence intervals.

Figure B3: Instrument correlation with local health system capacity
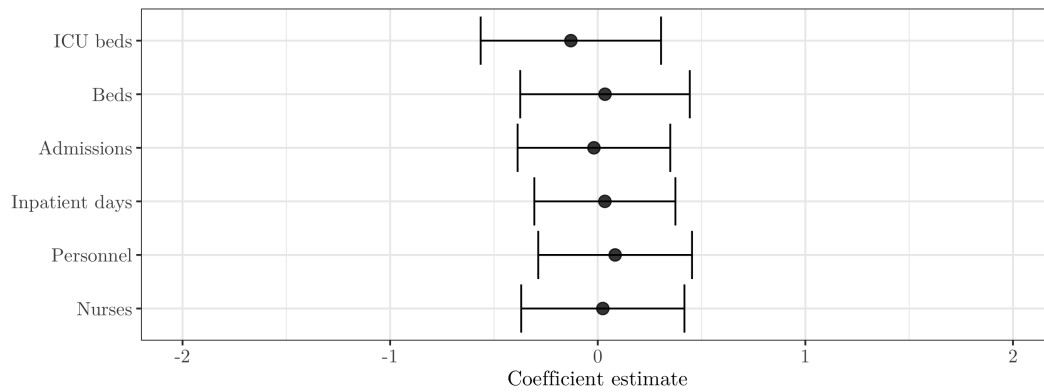
Notes: Figure B3 shows the coefficients from a series of regressions of each proxy for health system capacity on our instrument, NonFoxHannity$_d$ × FoxShare$_d$ — that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight* — conditional on the two interactants and a small set of other controls accounting for local viewership patterns (the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the local viewership share of MSNBC, and population size and density). All dependent variables are in per capita terms and are scaled to a standard normal distribution. We cluster standard errors at the DMA level and report 95% confidence intervals.

Figure B4: Reduced-form and 2SLS coefficient estimates on cases and deaths

Panel A: Reduced-form

Panel B: 2SLS
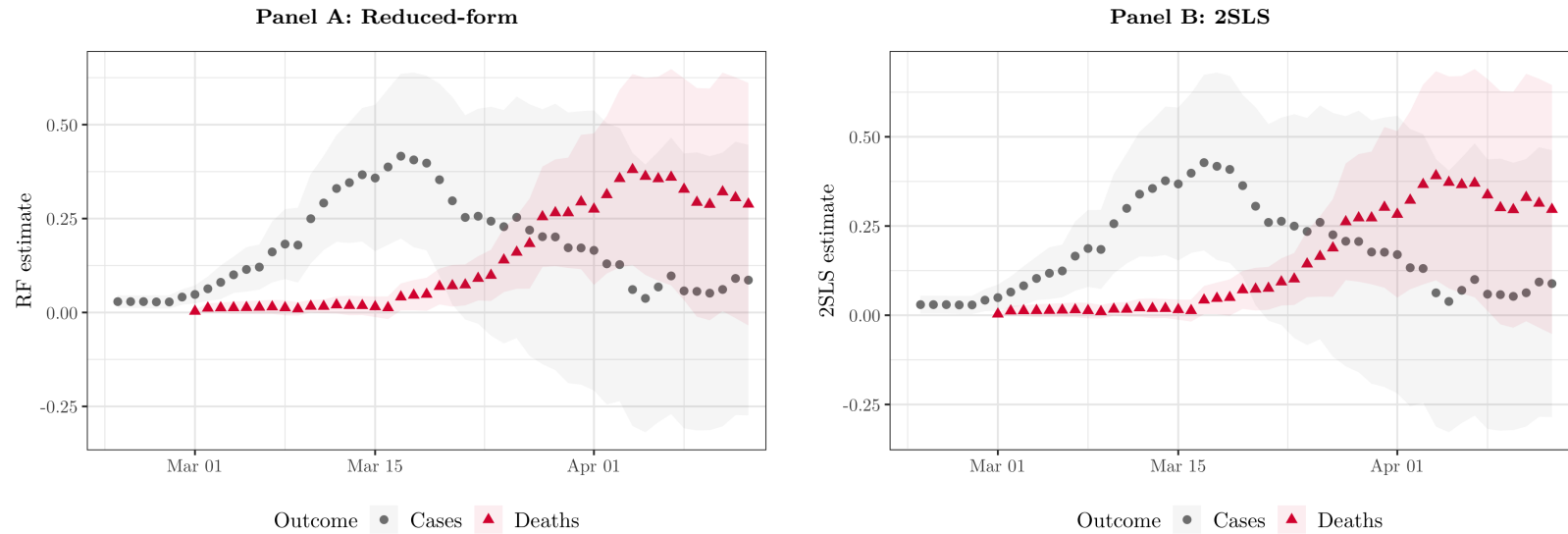
Notes: Figure B4 shows day-by-day reduced form (Panel A) and 2SLS (Panel B) estimates on log one plus cases and log one plus deaths. In Panel A, we report day-by-day effects of our alternative instrument, NonFoxHannity$_d$ × FoxShare$_d$ — that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight* — on log deaths and log cases, conditional state fixed effects and a large set of controls: Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the number of predicted TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. In Panel B, we report day-by-day effects of the standardized difference in viewership of *Hannity* vs. *Tucker Carlson Tonight*, instrumented by NonFoxHannity$_d$ × FoxShare$_d$ and controlling for state fixed effects and the same set of covariates as in Panel A. We cluster standard errors at the DMA level and report 95% confidence intervals.

Figure B5: 2SLS: robustness to combinations of controls

Panel A: Estimates on cases (March 14, 2020)
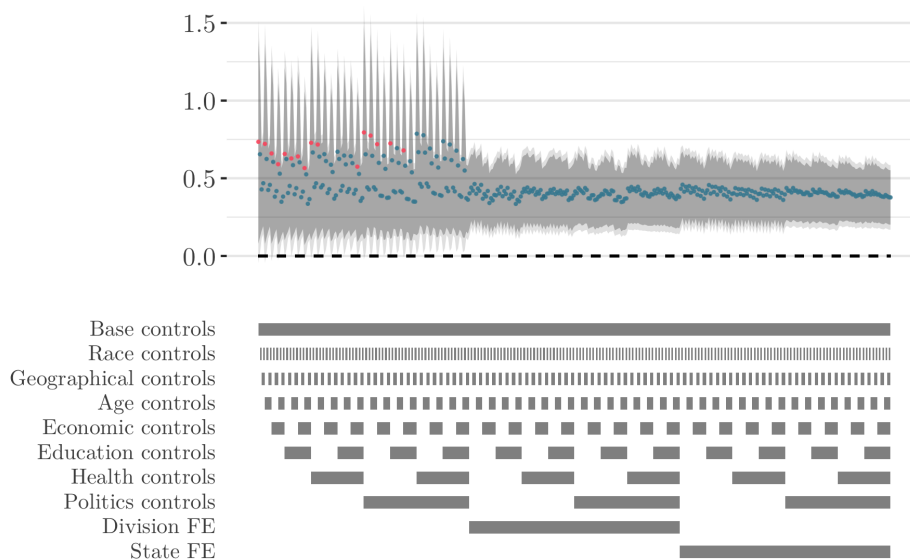
Panel B: Estimates on deaths (March 28, 2020)
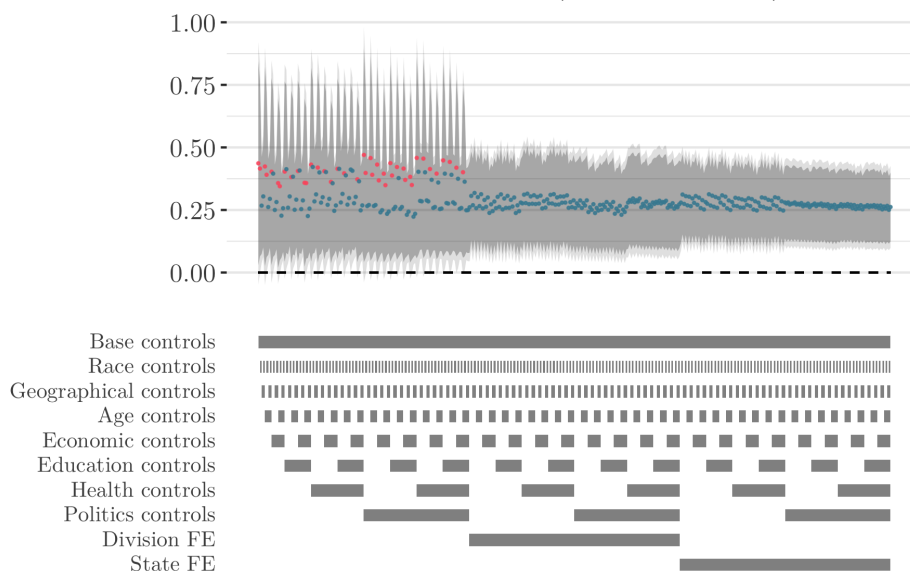
Notes: Figure B5 shows robustness of our two-stage least squares estimates for the specifications for log cases on March 14 (Panel A) and log deaths on March 28 (Panel B) under every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We cluster standard errors at the DMA level and report 90% and 95% confidence intervals for each model. Blue points are significant at the 5% level; red points are significant at the 10% level; black points are not significant at the 10% level.

Figure B6: Carlson-Hannity pandemic coverage gap and effects on cases and deaths
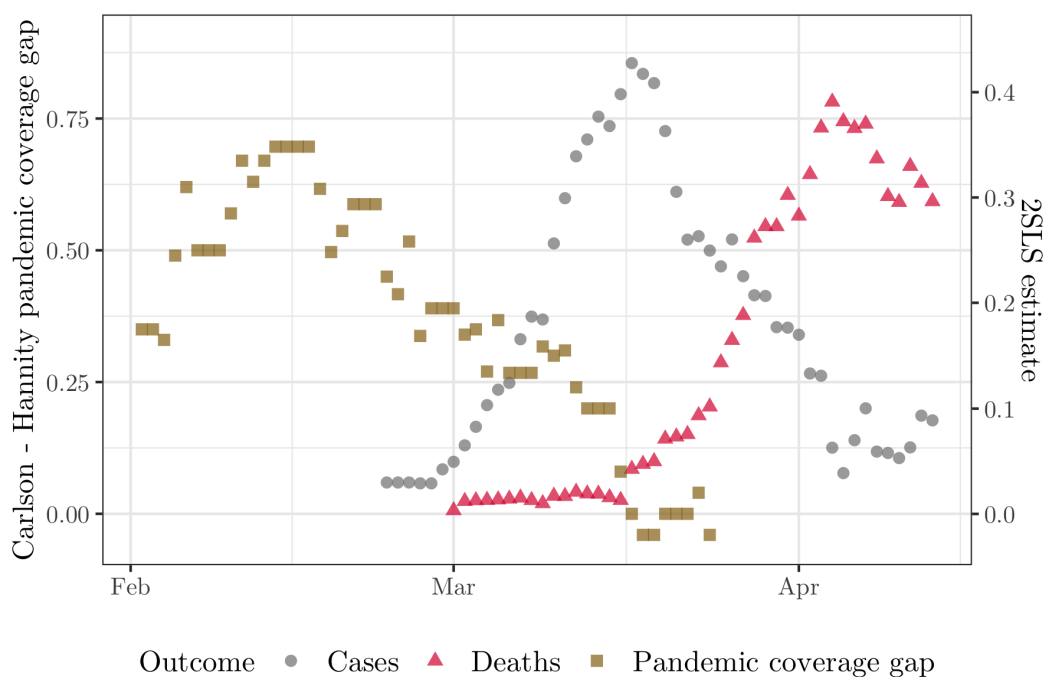
Notes: Figure B6 shows, in brown squares corresponding to the left y-axis, the difference in portrayed seriousness of the coronavirus threat on *Tucker Carlson Tonight* vs. *Hannity*, as rated by Amazon Mechanical Turk coders. The difference peaks in mid-February, a period during which there was no discussion of the coronavirus on *Hannity* and during which *Tucker Carlson Tonight* discussed the coronavirus virtually every show. The figure also shows, in gray circles and red triangles corresponding to the right y-axis, 2SLS estimates of the Hannity-Carlson viewership gap (instrumented by $\text{NonFoxHannity}_d \times \text{FoxShare}_d$) on log one plus cases and log one plus deaths. All specifications control for state fixed effects, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016.

Figure B7: 2SLS estimates of effect of the pandemic coverage index on cases and deaths
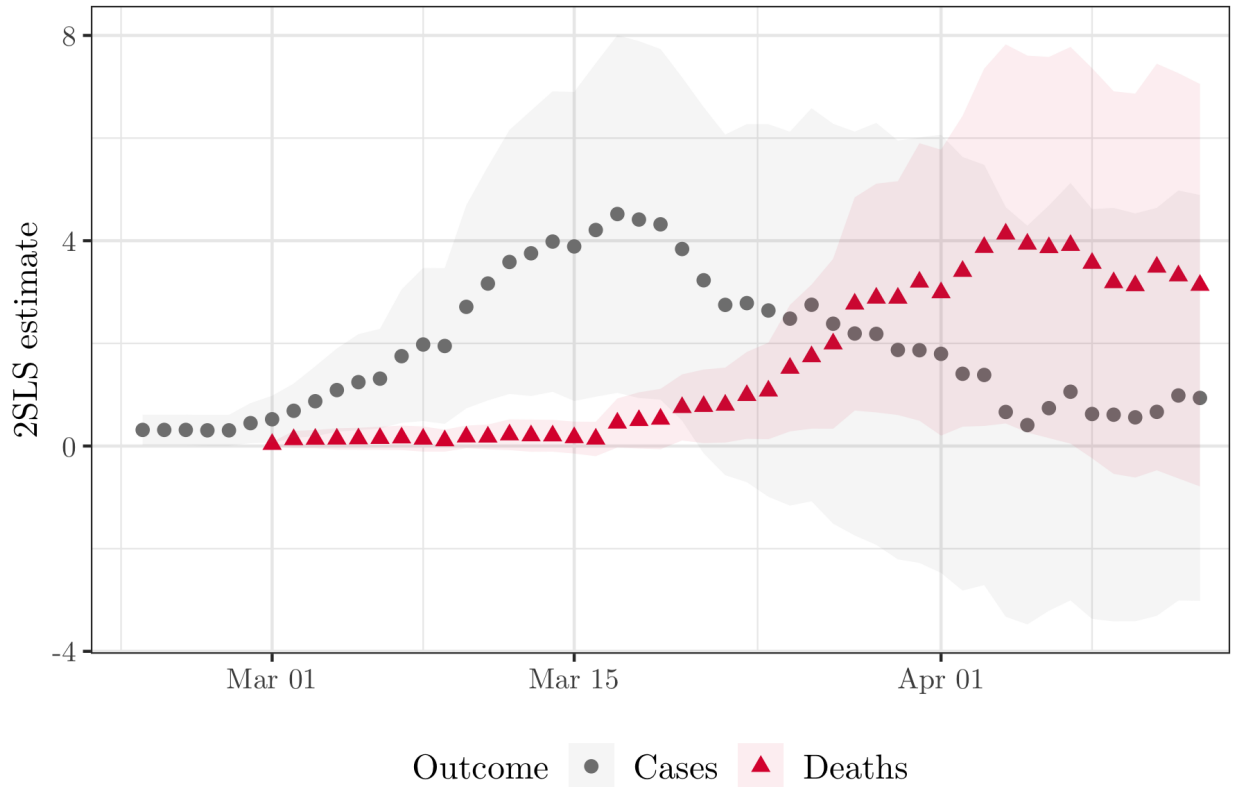
Notes: Figure B7 shows day-by-day 2SLS estimates on log one plus cases and log one plus deaths on the coverage gap described in Section 6. The figure reports estimates from 2SLS regressions of each outcome on the coverage gap, instrumented by NonFoxHannity$_d$ × FoxShare$_d$, controlling for state fixed effects, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. We cluster standard errors at the DMA level and report 95% confidence intervals.

Table B1: Effect of differential viewership on cases (robustness: alternative instrument)

	Dependent variable:							
	COVID-19 cases							
	Feb 22 (1)	Feb 29 (2)	Mar 07 (3)	Mar 14 (4)	Mar 21 (5)	Mar 28 (6)	Apr 04 (7)	Apr 11 (8)
Panel A: *Ordinary least squares*								
Hannity-Carlson viewership difference	0.002	0.005**	0.018*	0.055**	0.119***	0.112**	0.103**	0.082*
	(0.002)	(0.002)	(0.010)	(0.022)	(0.039)	(0.044)	(0.049)	(0.049)
Panel B: *Reduced form*								
Non-Fox TVs on × Fox share	0.029***	0.041***	0.161***	0.367***	0.297**	0.202	0.061	0.061
	(0.009)	(0.010)	(0.041)	(0.091)	(0.141)	(0.173)	(0.185)	(0.186)
Panel C: *Two-stage least squares*								
H-C viewership difference (predicted)	0.030**	0.042***	0.166***	0.377***	0.305**	0.207	0.063	0.063
	(0.013)	(0.016)	(0.049)	(0.106)	(0.141)	(0.179)	(0.191)	(0.191)
Full controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102	3,102	3,102

Notes: The dependent variable is the log of 1 plus the cumulative number of COVID-19 cases in the county as of the date referenced in the column. Panel A reports OLS estimates of the log of one plus cases upon standardized difference in Hannity-Carlson viewership. Panel B reports reduced-form estimates of the log of one plus cases upon the instrument, $\text{NonFoxHannity}_d \times \text{FoxShare}_d$— that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. Panel C reports two-stage least squares estimates of the log of one plus cases upon the standardized difference in Hannity-Carlson viewership, instrumented by $\text{NonFoxHannity}_d \times \text{FoxShare}_d$. OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, MSNBC's share of cable in January 2018, population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. IV controls are identical to OLS controls, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Table B2: Effect of differential viewership on deaths (robustness: alternative instrument)

	Dependent variable:						
	COVID-19 deaths						
	Feb 29 (1)	Mar 07 (2)	Mar 14 (3)	Mar 21 (4)	Mar 28 (5)	Apr 04 (6)	Apr 11 (7)
Panel A: *Ordinary least squares*							
Hannity-Carlson viewership difference	0.0004 (0.0005)	0.002 (0.003)	0.001 (0.004)	0.018* (0.009)	0.051** (0.023)	0.079** (0.034)	0.105** (0.041)
Panel B: *Reduced form*							
Non-Fox TVs on × Fox share	0.003* (0.002)	0.015 (0.010)	0.018 (0.013)	0.071** (0.028)	0.255*** (0.068)	0.380*** (0.130)	0.321** (0.162)
Panel C: *Two-stage least squares*							
H-C viewership difference (predicted)	0.003 (0.002)	0.015 (0.011)	0.019 (0.014)	0.073** (0.031)	0.262*** (0.083)	0.391*** (0.149)	0.330* (0.177)
Full controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102	3,102

Notes: The dependent variable is the log of 1 plus the cumulative number of COVID-19 deaths in the county as of the date referenced in the column. Panel A reports OLS estimates of the log of one plus deaths upon standardized difference in Hannity-Carlson viewership. Panel B reports reduced-form estimates of the log of one plus deaths upon the instrument, $\text{NonFoxHannity}_d \times \text{FoxShare}_d$— that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight.*. Panel C reports two-stage least squares estimates of the log of one plus deaths upon the standardized difference in Hannity-Carlson viewership, instrumented by $\text{NonFoxHannity}_d \times \text{FoxShare}_d$. OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, MSNBC's share of cable in January 2018, population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. IV controls are identical to OLS controls, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Table B3: Differential coverage and COVID-19 outcomes across all Fox News evening shows

	Inverse pandemic coverage index				Cases Mar 14	Deaths Mar 28
	(1)	(2)	(3)	(4)	(5)	(6)

Panel A: *OLS: inverse pandemic coverage index on relative viewership*

H-C viewership difference	0.129***	0.129***				
	(0.008)	(0.008)				

Panel B: *RF: inverse pandemic coverage index on instrument*

$\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$			0.088***	0.092***		
			(0.032)	(0.032)		

Panel C: *2SLS: cases and deaths on inverse predicted pandemic coverage index*

$-1\times$ coverage index (predicted)					3.984***	2.768***
					(1.493)	(1.059)

Base controls	Yes	Yes	Yes	Yes	Yes	Yes
Main controls	No	Yes	No	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102

Notes: Panel A reports OLS estimates of the (inverse of the) pandemic coverage index on the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*. Panel B reports reduced-form estimates of the inverse pandemic coverage index on our instrument, NonFoxHannity$_d$ × FoxShare$_d$— that is, the number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. Columns (5) and (6) in Panel C reports 2SLS estimates of the log of one plus the number of cases on March 14 and the log of one plus the number of deaths on March 28, respectively, on the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*, instrumented by NonFoxHannity$_d$ × FoxShare$_d$. Base OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, and the log of the county's total population. Base controls for the reduced form and the two-stage least squares are identical, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Main controls for both OLS and IV include population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. Standard errors are clustered at the DMA level. Robust standard errors are reported.

C   Robustness Check: Inverse Hyperbolic Sine Transformation

Figure C1: OLS estimates of effect of differential viewership on cases and deaths
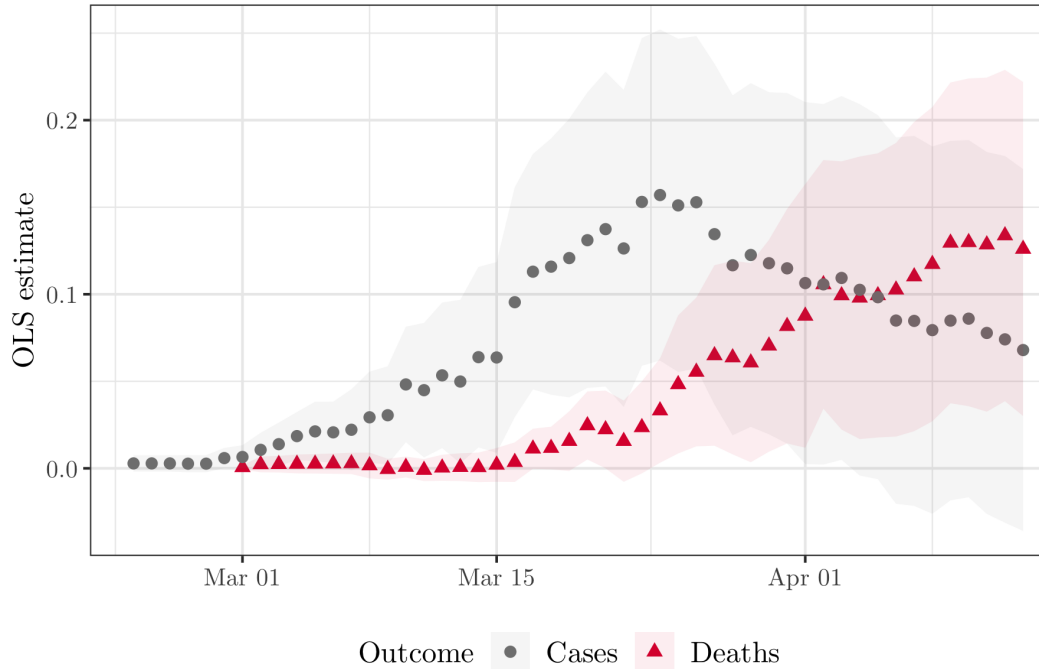
Notes: Figure C1 displays effects of differential viewership of *Hannity* and *Tucker Carlson Tonight* on the inverse hyperbolic sine of cases and the inverse hyperbolic sine of deaths. We report day-by-day results for the correlation between deaths and cases with the standardized difference in viewership of *Hannity* and *Tucker Carlson Tonight*. All regressions are conditional on state fixed effects and a large set of controls: the November 2018 and January 2020 market share of Fox News, the November 2018 market share of MSNBC, log total population, population density, the number of TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, g unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. We cluster standard errors at the DMA level and report 95% confidence intervals.

Figure C2: OLS: robustness to combinations of controls

Panel A: Estimates on cases (March 14, 2020)

Panel B: Estimates on deaths (March 28, 2020)
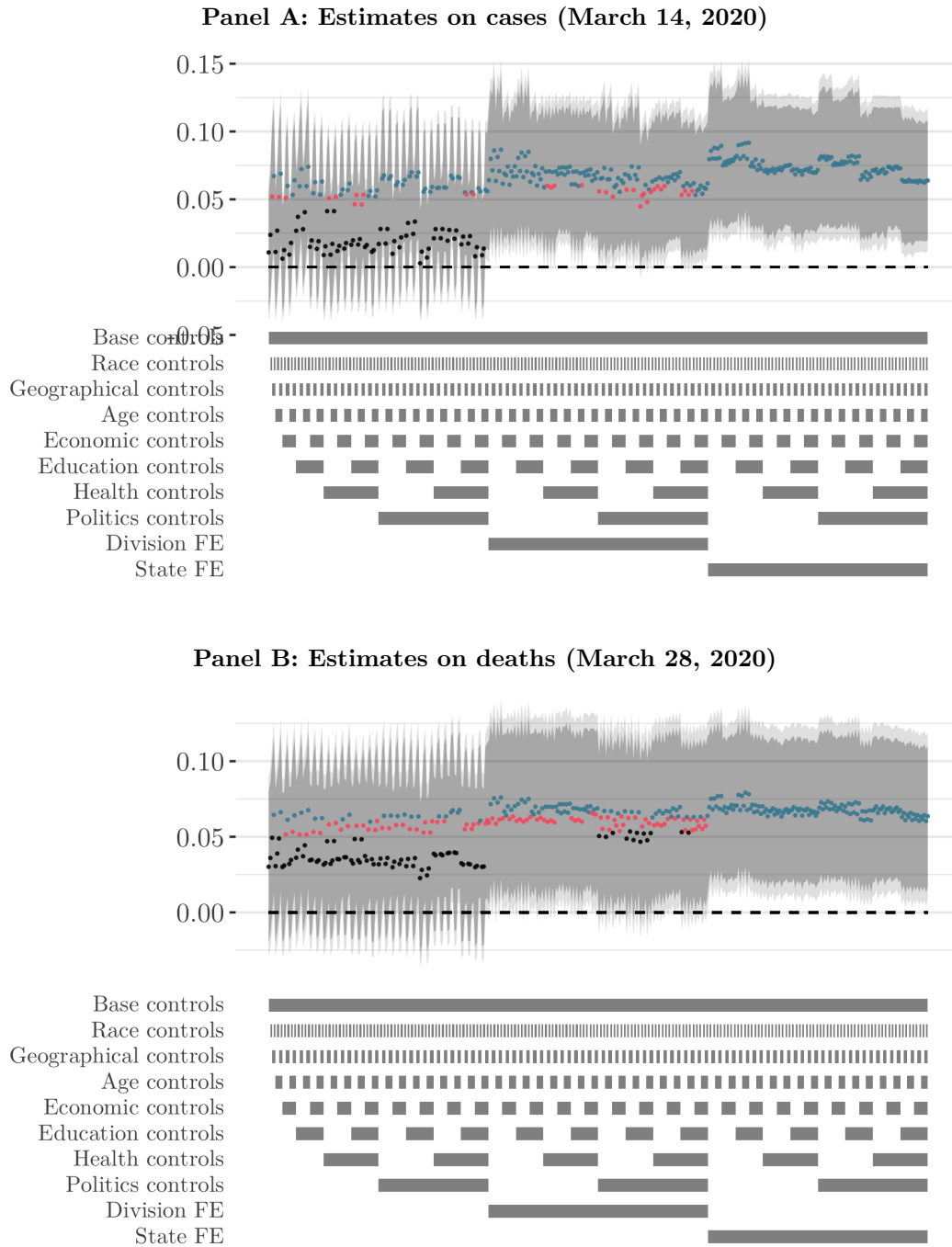
Notes: Figure C2 shows robustness of our OLS estimates for the specifications for cases on March 14 (Panel A) and deaths on March 28 (Panel B) under every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We cluster standard errors at the DMA level and report 90% and 95% confidence intervals for each model. Blue points are significant at the 5% level; red points are significant at the 10% level; black points are not significant at the 10% level.

Figure C3: Reduced-form and 2SLS estimates of effect of differential viewership on cases and deaths

Panel A: Reduced-form

Panel B: 2SLS
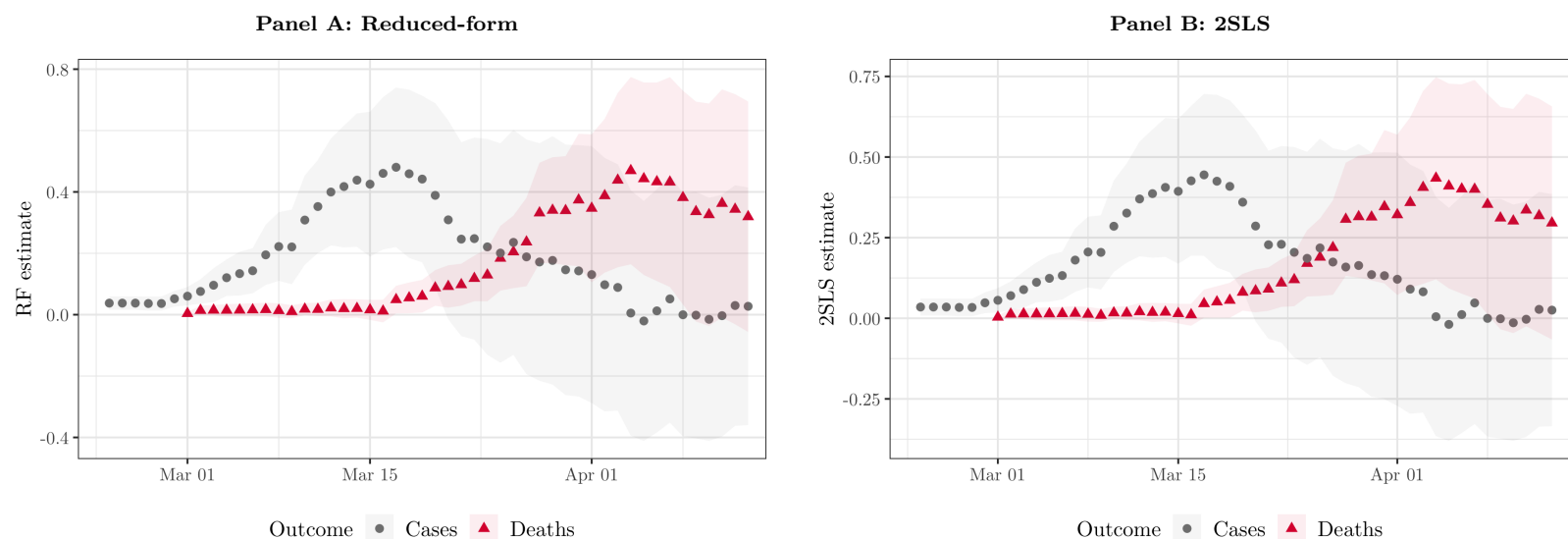
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Notes: Figure C3 shows day-by-day reduced form (Panel A) and 2SLS (Panel B) estimates for the inverse hyperbolic sine of cases and the inverse hyperbolic sine of deaths. In Panel A, we report day-by-day effects of our instrument, $\text{NonFoxHannity}_d \times \text{FoxShare}_d$, on deaths and cases conditional on state fixed effects and a large set of controls: Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the number of predicted TVs turned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. In Panel B, we report day-by-day effects of the standardized difference in viewership of *Hannity* vs. *Tucker Carlson Tonight*, instrumented by $\text{NonFoxHannity}_d \times \text{FoxShare}_d$ and controlling for state fixed effects and the same set of covariates as in Panel A. We cluster standard errors at the DMA level and report 95% confidence intervals.

Figure C4: 2SLS: robustness to combinations of controls

Panel A: Estimates on cases (March 14, 2020)

Panel B: Estimates on deaths (March 28, 2020)
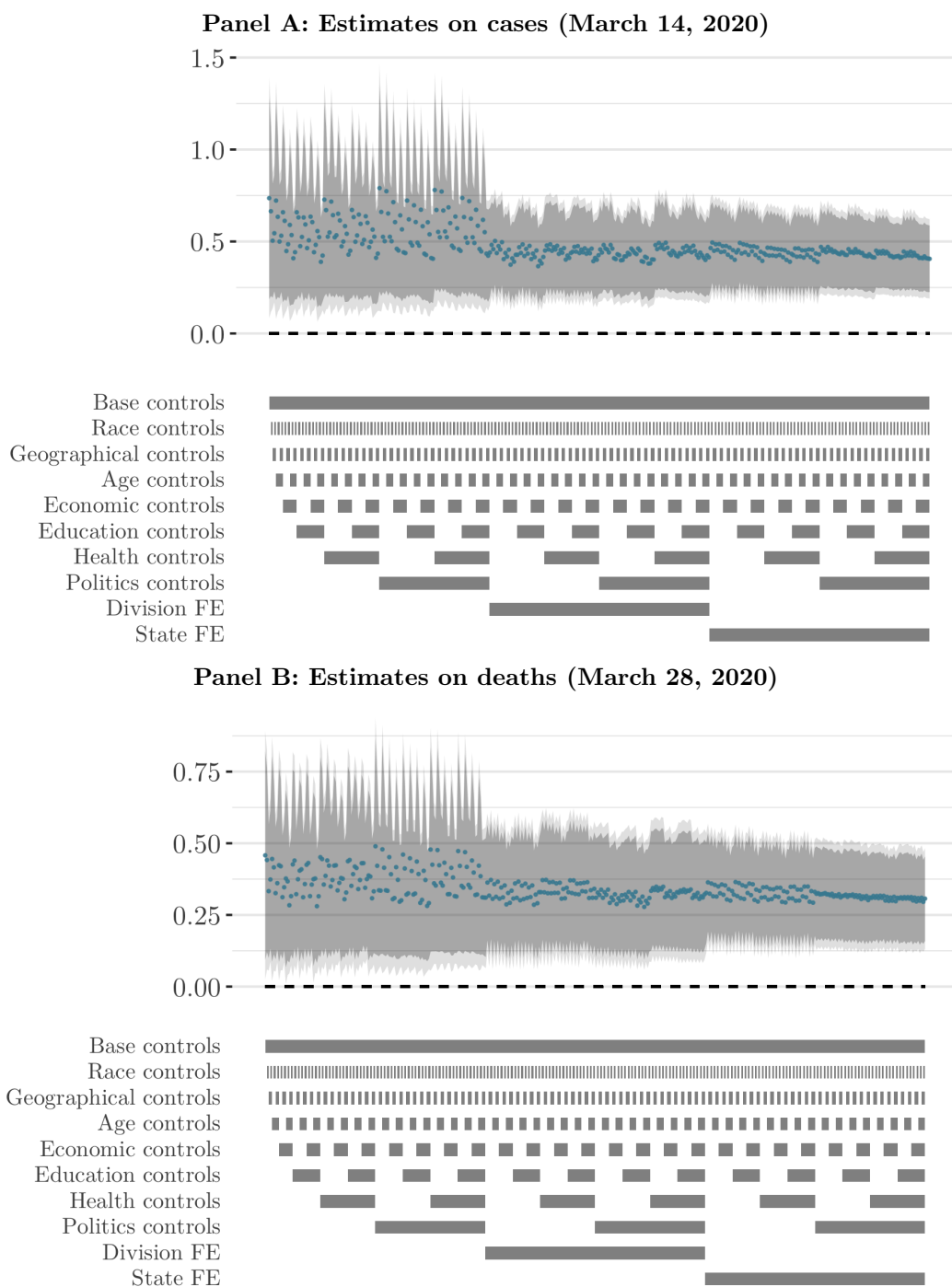
Notes: Figure C4 shows robustness of our two-stage least squares estimates for the specifications for the inverse hyperbolic sine of cases on March 14 (Panel A) and the inverse hyperbolic sine of deaths on March 28 (Panel B) under every possible combination of our seven sets of county-level controls (race, geography, age, economic, education, health, politics) and our three levels of fixed effects (no fixed effects, census division fixed effects, and state fixed effects). We cluster standard errors at the DMA level and report 90% and 95% confidence intervals for each model. Blue points are significant at the 5% level; red points are significant at the 10% level; black points are not significant at the 10% level.

Figure C5: Carlson-Hannity pandemic coverage gap and effects on cases and deaths
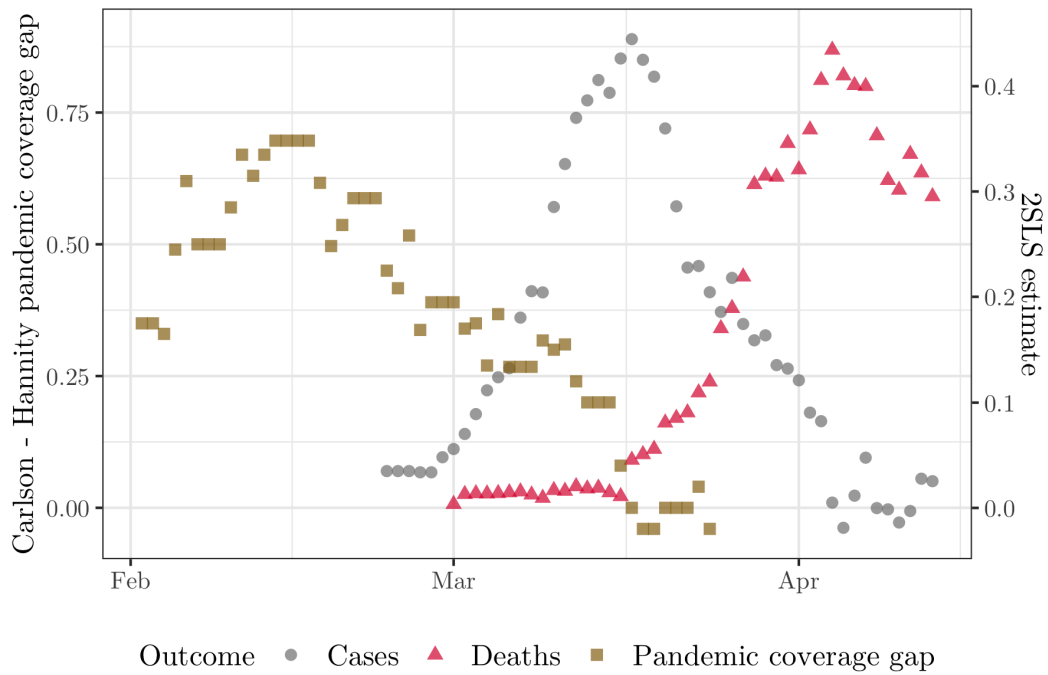
Notes: Figure C5 shows, in brown squares corresponding to the left *y*-axis, the difference in portrayed seriousness of the coronavirus threat on *Tucker Carlson Tonight* vs. *Hannity*, as rated by Amazon Mechanical Turk coders. The difference peaks in mid-February, a period during which there was no discussion of the coronavirus on *Hannity* and during which *Tucker Carlson Tonight* discussed the coronavirus virtually every show. The figure also shows, in gray circles and red triangles corresponding to the right *y*-axis, 2SLS estimates of the Hannity-Carlson viewership gap (instrumented by $\text{NonFoxHannity}_d \times \text{FoxShare}_d$) on the inverse hyperbolic sine of cases and the inverse hyperbolic sine of deaths. All specifications control for state fixed effects, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016.

Figure C6: 2SLS estimates of effect of the pandemic coverage index on cases and deaths
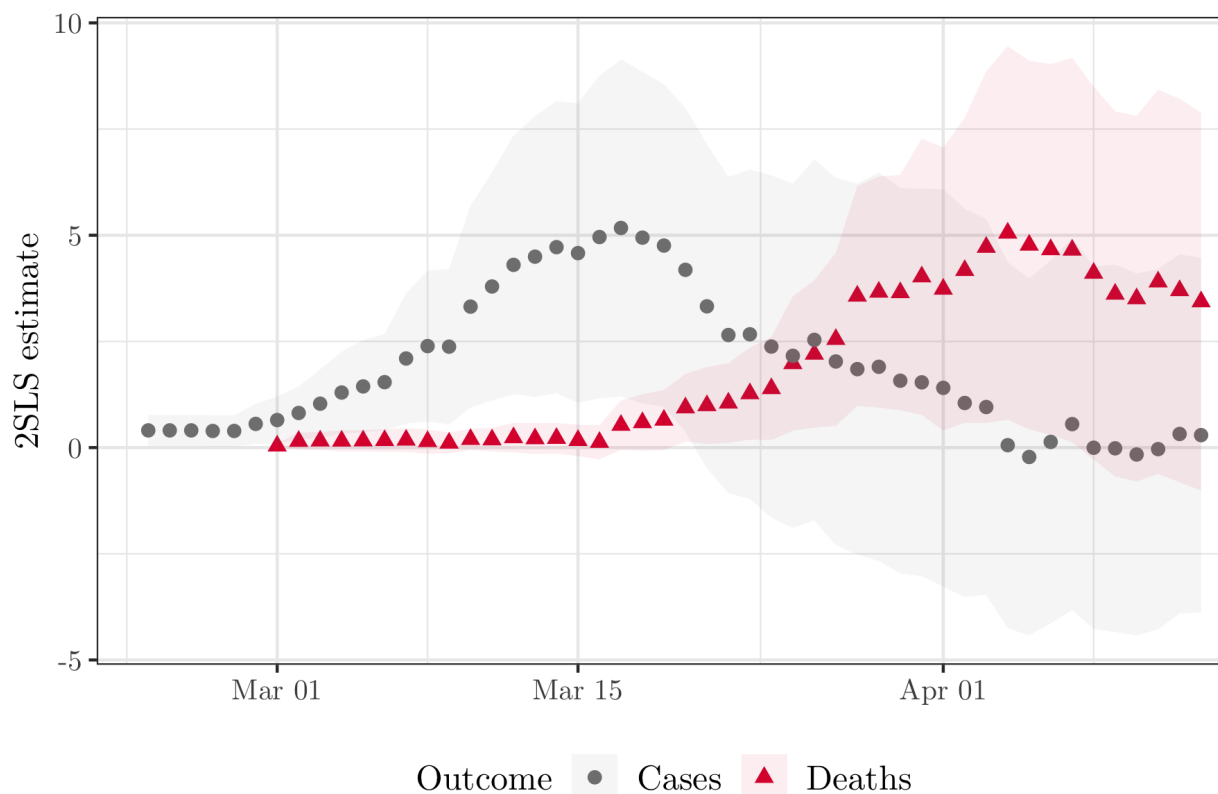
Notes: Figure C6 shows day-by-day 2SLS estimates for the inverse hyperbolic sine of cases and the inverse hyperbolic sine of deaths on the inverse of the coverage index described in Section 6. The figure reports estimates from 2SLS regressions of each outcome on the coverage index, instrumented by $\text{NonFoxHannity}_d \times \text{FoxShare}_d$, controlling for state fixed effects, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, the predicted number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, the population-weighted latitude and longitude, the percent in the county living in rural areas, the log of the distance to Seattle, the percent white, Hispanic, and black, the percent over the age of sixty-five, the share of men and women lacking high school degrees, the share of men and women lacking college degrees, the fraction of the population lacking health insurance, the average number of days with self-reported poor physical health over the last 30 days at the county level, the percent under the federal poverty line, log median household income, the unemployment rate, the 2016 Republican vote share, and the log total number of votes cast in 2016. We cluster standard errors at the DMA level and report 95% confidence intervals.

Table C1: Effect of differential viewership on cases

	Dependent variable:							
	COVID-19 cases							
	Feb 22 (1)	Feb 29 (2)	Mar 07 (3)	Mar 14 (4)	Mar 21 (5)	Mar 28 (6)	Apr 04 (7)	Apr 11 (8)
Panel A: *Ordinary least squares*								
Hannity-Carlson viewership difference	0.003	0.006**	0.022*	0.064**	0.137***	0.117**	0.103*	0.078
	(0.002)	(0.003)	(0.012)	(0.026)	(0.046)	(0.050)	(0.054)	(0.053)
Panel B: *Reduced form*								
Non-Fox TVs on × Fox share	0.038***	0.052***	0.195***	0.438***	0.309*	0.172	0.005	−0.003
	(0.011)	(0.013)	(0.050)	(0.111)	(0.165)	(0.197)	(0.204)	(0.201)
Panel C: *Two-stage least squares*								
H-C viewership difference (predicted)	0.035***	0.048***	0.180***	0.406***	0.286*	0.159	0.005	−0.003
	(0.013)	(0.016)	(0.050)	(0.110)	(0.151)	(0.184)	(0.189)	(0.186)
Full controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102	3,102	3,102

Notes: The dependent variable is the log of 1 plus the cumulative number of COVID-19 cases in the county as of the date referenced in the column. Panel A reports OLS estimates of the inverse hyperbolic sine of cases upon standardized difference in Hannity-Carlson viewership. Panel B reports reduced-form estimates of the inverse hyperbolic sine of cases upon the instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. Panel C reports two-stage least squares estimates of the inverse hyperbolic sine of cases upon the standardized difference in Hannity-Carlson viewership, instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$. OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, MSNBC's share of cable in January 2018, population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. IV controls are identical to OLS controls, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Table C2: Effect of differential viewership on deaths

	Dependent variable:						
	COVID-19 deaths						
	Feb 29 (1)	Mar 07 (2)	Mar 14 (3)	Mar 21 (4)	Mar 28 (5)	Apr 04 (6)	Apr 11 (7)
Panel A: *Ordinary least squares*							
Hannity-Carlson viewership difference	0.001	0.003	0.001	0.022**	0.064**	0.098**	0.129***
	(0.001)	(0.003)	(0.004)	(0.011)	(0.028)	(0.041)	(0.049)
Panel B: *Reduced form*							
Non-Fox TVs on × Fox share	0.004*	0.017	0.020	0.092***	0.332***	0.469***	0.363*
	(0.002)	(0.011)	(0.015)	(0.035)	(0.083)	(0.156)	(0.190)
Panel C: *Two-stage least squares*							
H-C viewership difference (predicted)	0.003	0.015	0.019	0.085**	0.307***	0.434***	0.336*
	(0.002)	(0.011)	(0.014)	(0.034)	(0.089)	(0.160)	(0.184)
Full controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102	3,102

Notes: The dependent variable is the log of 1 plus the cumulative number of COVID-19 deaths in the county as of the date referenced in the column. Panel A reports OLS estimates of the inverse hyperbolic sine of deaths upon standardized difference in Hannity-Carlson viewership. Panel B reports reduced-form estimates of the inverse hyperbolic sine of deaths upon the instrument, $\mathrm{Non\widehat{FoxHannity}}_d \times \mathrm{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. Panel C reports two-stage least squares estimates of the inverse hyperbolic sine of deaths upon the standardized difference in Hannity-Carlson viewership, instrumented by $\mathrm{Non\widehat{FoxHannity}}_d \times \mathrm{FoxShare}_d$. OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, the log of the county's total population, MSNBC's share of cable in January 2018, population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. IV controls are identical to OLS controls, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Standard errors are clustered at the DMA level. Robust standard errors are reported.

Table C3: Differential coverage and COVID-19 outcomes across all Fox News evening shows

| | *Dependent variable:* | | | | | |
| | \multicolumn{4}{c}{Inverse pandemic coverage index} | | | Cases Mar 14 | Deaths Mar 28 |
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: *OLS: inverse pandemic coverage index on relative viewership*						
H-C viewership difference	0.129***	0.129***				
	(0.008)	(0.008)				
Panel B: *RF: inverse pandemic coverage index on instrument*						
$\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$			0.089***	0.093***		
			(0.031)	(0.031)		
Panel C: *2SLS: cases and deaths on inverse predicted pandemic coverage index*						
$-1\times$ coverage index (predicted)					4.720***	3.569***
					(1.752)	(1.321)
Base controls	Yes	Yes	Yes	Yes	Yes	Yes
Main controls	No	Yes	No	Yes	Yes	Yes
State FEs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,102	3,102	3,102	3,102	3,102	3,102

Notes: Panel A reports OLS estimates of the (inverse of the) pandemic coverage index on the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*. Panel B reports reduced-form estimates of the inverse pandemic coverage index on our instrument, $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$ — that is, the predicted number of TVs on during Hannity's timeslot, excluding TVs watching *Hannity*, multiplied by Fox News' viewership share, excluding *Hannity* and *Tucker Carlson Tonight*.. Columns (5) and (6) in Panel C reports 2SLS estimates of the inverse hyperbolic sine of the number of cases on March 14 and the inverse hyperbolic sine of the number of deaths on March 28, respectively, on the standardized difference between viewership of *Hannity* and *Tucker Carlson Tonight*, instrumented by $\widehat{\text{NonFoxHannity}}_d \times \text{FoxShare}_d$. Base OLS controls include the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle*, Fox News' and MSNBC's share of cable in January 2018, Fox News' share of television in January 2020, the population density of the county, and the log of the county's total population. Base controls for the reduced form and the two-stage least squares are identical, except the number of TVs tuned to non-Fox channels during *Hannity*, *Tucker Carlson Tonight*, and *The Ingraham Angle* are replaced with the predicted number of TVs tuned to non-Fox channels during these timeslots. Main controls for both OLS and IV include population-weighted latitude and longitude, log distance to Seattle, the percent of the population living in a rural area, the population over the age of 65, the percent male with no high school degree, the percent female with no high school degree, the percent male with no college degree, the percent female with no college degree, an age-adjusted measure of the average physical health in the county, the percent uninsured, the percent below the federal poverty line, the log of the median household income, the unemployment rate, the Republican vote share in 2016, and the log of the total number of votes in the county in 2016. Standard errors are clustered at the DMA level. Robust standard errors are reported.

D Survey Instrument

D.1 Consent and demographics questions

Please review the following consent form before proceeding with this survey.
Consent for Participation in a Research Study

DESCRIPTION: We are researchers at the University of Warwick studying how the news media portrays the coronavirus. Participation should take about 10 minutes.

RISKS and BENEFITS: The risks to your participation in this online study are those associated with basic surveys including boredom, fatigue, mild stress, or breach of confidentiality. The benefit to you is the learning experience from participating in a research study. The benefit to society is the contribution to scientific knowledge. The University of Warwick will only use this data for research purposes.

SUBJECT'S RIGHTS: Your participation is voluntary. You may stop participating at any time by closing the browser window.

For additional questions about this research, you may contact:
• Christopher Roth at Christopher.Roth@warwick.ac.uk

Please indicate, in the box below, that you are at least 18 years old, have read and understand this consent form, and you agree to participate in this online research study.

○ I agree to participate in the research

○ I do not agree to participate in the research

→

What is your exact age?

What is your gender?

- ○ Male
- ○ Female

With which political party do you identify?

- ○ Democratic Party
- ○ Republican Party
- ○ Independent

Do you have a job outside of taking surveys?

○ Yes: full-time (35+ hours a week)

○ Yes: part-time (less than 35 hours a week)

○ No: homemaker

○ No: currently seeking employment

○ No: student

○ No: retired

○ No: other

What was your family's gross household income in 2019 in US dollars?

○ Less than $15,000

○ $15,000 to $24,999

○ $25,000 to $49,999

○ $50,000 to $74,999

○ $75,000 to $99,999

○ $100,000 to $149,999

○ $150,000 to $200,000

○ More than $200,000

Which of the following best describes your race or ethnicity?

- ○ African American/Black
- ○ Asian/Asian American
- ○ Caucasian/White
- ○ Native American, Inuit or Aleut
- ○ Native Hawaiian/Pacific Islander
- ○ Other

Are you of Hispanic, Latino, or Spanish origin?

- ○ Yes
- ○ No

What is the highest level of education you have completed or the highest degree you have received?

○ Less than high school degree

○ High school graduate (high school diploma or equivalent including GED)

○ Some college but no degree

○ Associate degree in college (2-year)

○ Bachelor's degree in college (4-year)

○ Master's degree

○ Doctoral degree

○ Professional degree (JD, MD)

→

D.2 Media consumption questions

Which, if any, of the following major TV news stations do you watch at least once a week?

☐ CNN

☐ MSNBC

☐ Fox News

☐ Other

→

D.2.1 Fox News

You indicated that you watch Fox News at least once a week. How often do you watch each of the following shows on Fox News?

	Never	Occasionally	Every day or most days
Sean Hannity	○	○	○
The Ingraham Angle	○	○	○
Other Fox show	○	○	○
The Five	○	○	○
The Story with Martha MacCallum	○	○	○
Tucker Carlson	○	○	○

→

D.2.2 CNN News

You indicated that you watch CNN at least once a week. How often do you watch each of the following shows on CNN?

	Never	Occasionally	Every day or most days
Anderson Cooper 360	○	○	○
Erin Burnett OutFront	○	○	○
CNN Tonight	○	○	○
Cuomo Prime Time	○	○	○
Other CNN show	○	○	○
The Situation Room	○	○	○

→

D.2.3 MSNBC News

You indicated that you watch MSNBC at least once a week. How often do you watch each of the following shows on MSNBC?

	Never	Occasionally	Every day or most days
The Beat with Ari Melber	○	○	○
Other MSNB show	○	○	○
All In with Chris Hayes	○	○	○
The Last Word with Lawrence O'Donnell	○	○	○
The 11th Hour with Brian Williams	○	○	○
The Rachel Maddow Show	○	○	○

→

D.3 Behavior change questions

Did you change any of your behaviors (for example: cancelling travel plans, washing hands or disinfecting significantly more than often, staying six feet away from others, asking to work from home, etc.) in response to the coronavirus over the last few weeks?

○ Yes

○ No

→

When did you first significantly change any of your behaviors (For example, cancelling travel plans, washing hands or disinfecting significantly more than often, staying six feet away from others, asking to work from home, etc.) in response to the coronavirus? How did you change your behavior? Why did you change your behavior?

On which date, did you first significantly change any of your behaviors in response to the coronavirus? (For example, cancelling travel plans, washing hands or disinfecting significantly more than often, staying six feet away from others, asking to work from home, etc.).

	Month	Day
Date of change in behavior	⬍	⬍

→

D.4   Post-outcome questions

What is your zipcode of residence?

→

Thank you very much participating in this survey. If you
have any comments, please let us know below.

→

Exhibit B

Research Article

The Relation between Media Consumption and Misinformation at the Outset of the SARS-CoV-2 Pandemic in the US

A US national probability-based survey during the early days of the SARS-CoV-2 spread in the US showed that, above and beyond respondents' political party, mainstream broadcast media use (e.g., NBC News) correlated with accurate information about the disease's lethality, and mainstream print media use (e.g., the New York Times) correlated with accurate beliefs about protection from infection. In addition, conservative media use (e.g., Fox News) correlated with conspiracy theories including believing that some in the CDC were exaggerating the seriousness of the virus to undermine the presidency of Donald Trump. Five recommendations are made to improve public understanding of SARS-CoV-2.

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Research questions

- In early March 2020, how informed was the US public about ways in which one can protect oneself from SARS-CoV-2 and of its relative lethality compared to the seasonal flu?
- Did party identification correlate with levels of information about the lethality of the virus?
- Does use of different types of media (e.g., mainstream, conservative, liberal; traditional or social media) correlate with accurate or inaccurate information regarding SARS-CoV-2 prevention? For example: Does use of any type of media correlate with information about lethality and appropriate methods of prevention? Does the use of social media rather than either broadcast or traditional print media covary with belief in misinformation and conspiracy theories regarding SARS-CoV-2? Does use of social media or of conservative media correlate with increased belief in conspiracy theories being trafficked in these venues?

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[1] *A publication of the Shorenstein Center on Media, Politics and Public Policy at Harvard University's John F. Kennedy School of Government.*

Essay summary

With coverage of SARS-CoV-2 dominating discussions on air, in print, and online, between March 3 and March 8, 2020 we fielded a US national probability phone survey of 1,008 respondents to (a) determine the accuracy of the public's understanding of the relative lethality of the seasonal flu and the coronavirus and of the need to prevent SARS-CoV-2's spread by hand washing and avoiding those showing symptoms of respiratory illness, and (b) assess the association between use of various media channels and accurate and inaccurate beliefs and conspiracy theories about SARS-CoV-2 while controlling for potential differences between Republicans and Democrats, who have been reported to differ in concern with SARS-CoV-2 (Gallup, 2020).

Implications

Public understanding of needed preventative measures and rejection of bogus ones is important because SARS-CoV-2 is highly contagious and potentially lethal (cdc.gov). Pollsters have identified partisan differences in views on SARS-CoV-2. In particular, a number of March 2020 polls showed that Republicans were less worried than were Democrats about exposure to the virus (Gallup 2020), less likely to consider the SARS-CoV-2 outbreak a major health threat (Pew 2020), and more likely to approve of President Donald Trump's handling of the "coronavirus pandemic" (Marist, 2020). Like this work, our early March data registered differences tied to partisanship in their concern about SARS-CoV-2, specifically that Republicans were less knowledgeable about the relative lethality of SARS-CoV-2. In addition, our data suggested an association between exposure to some kinds of media, conservative and social media in particular, and being misinformed, associations that persist when partisanship is considered. Our data warrant five recommendations.

The need for proactive communication about prevention

Because hand washing and social distancing can prevent the spread of respiratory viruses including the flu, the finding that early in March, 87% believed that these practices were preventative signals a success of public health messaging. However, the gaps in the public's background knowledge that we identified should alert public health officials to the ongoing need for effective communication of needed information long before a crisis.

Several areas need attention. First, the finding that 21% thought that taking vitamin C probably or definitely prevents infection and 26% were unsure of whether it would or not suggests unwarranted public confidence in this supplement. As a Cochrane meta-analysis confirmed (Cochrane 2013), vitamin C consumption does not even prevent the common cold "in the ordinary population," contrary to what the commonplace claim avers. Nor, despite the claims on social media sites, does it prevent Anthrax and crib death (Kata 2010). Like those other false claims, the one asserting that taking vitamin C prevents one from contracting SARS-CoV-2 was circulating on Facebook in January 2020 (BBC Monitoring & UGC Newsgathering, 2020).

Find out what misinformation to debunk

Because debunking misinformation including conspiracy theories is difficult (Chan et al., 2017), and not without potential unintended consequences (Nyhan et al., 2014), before deciding whether to debunk a conspiracy theory or other misinformation, fact-checking organizations need to know that enough people have embraced it to be worrisome. In the absence of such prevalence data, corrective efforts may do more harm than good by inadvertently increasing awareness of the problematic claim. One possible benchmark is to correct for beliefs considered salient in a population, which according to Ajzen and Fishbein (1980) is at least 10% of a population.

The individual conspiracy theories we studied met or passed this threshold. Ten percent of our survey respondents characterized as probably or definitely true the conspiracy theory that the US government created the virus, a conclusion that calls into question the integrity of the US government at a time at which public confidence is required to mount a national defense against a spreading menace. Among the sources circulating this canard were high-level Chinese officials who claimed that it was the US military that brought the virus to China (Reuters, 2020).

Nearly one in five of our respondents (19%) reported believing that some in the CDC are exaggerating the seriousness of the virus to undermine the Trump presidency[2]. This assumption has the potential to engender distrust in one of the two US government agencies tasked not only with protecting public health but also with communicating accurate information about ways to protect oneself and others. On social media, this theory was advanced under headlines such as "Coincidence? CDC Official Hitting the Coronavirus Panic Switch is Rod Rosenstein's Sister" (O'Hara, 2020). Rosenstein is a former deputy attorney general who played a central role in the Mueller investigation of Russian interference in the 2016 US presidential election.

The notion that the virus was created by the Chinese as a bioweapon, which has the potential to fuel xenophobia and racism, was rated "probably true" or "definitely true" by 23% of our survey respondents. This theory was floated by Senator Tom Cotton (R-AR) on Fox News in mid-February, endorsed by Steve Bannon, former advisor to President Donald Trump (Stevenson, 2020), peddled in the conservative Washington Times (Gertz, 2020), and touted by conservative talk radio host Rush Limbaugh who said, "It probably is a ChiCom laboratory experiment that is in the process of being weaponized" (Limbaugh, 2020). Our data suggest that it makes more sense for fact-checkers to take on the CDC and Chinese bioweapon claims than the one alleging that the virus was created by the US.

A baseline for monitoring social media interventions

By offering an early window on the level of public information and belief in conspiracy theories about SARS-CoV-2, this study provides a baseline that one can use to assess the success of the social media platforms' efforts to blunt misinformation. As this study was fielding on March 3rd, Facebook's CEO Mark Zuckerberg announced that "Facebook was removing false claims and conspiracy theories flagged by global health organizations and the company is blocking people from running ads that try to exploit the fears of the public by pitching snake oil cures" (Techcrunch, 2020). Moreover, Twitter, YouTube, and Facebook now direct those searching for "coronavirus" to sources such as the Centers for Disease Control and Prevention (CDC). Twitter also initiated a campaign called #KnowTheFacts (Brandon, 2020). Two of the mistaken claims on which we focused have been interdicted by the platforms. Yet, before YouTube removed a video asserting that the pandemic had been bioengineered, 570,000 subscribers to the website SGT Report had potentially been exposed to it (Herrera, 2020). To the best of our knowledge, our study is the first to assess public belief in the conspiracy theories and preventive effects of vitamin C that circulated on social media.

Proposed interventions in conservative media

The data in this study should motivate public health officials to place public service announcements, encourage hyperlinks to the CDC information pages, and seek interviews on outlets whose audiences are less knowledgeable, more misinformed, or more accepting of conspiracy theories. This strategy was exemplified by National Institute of Allergy and Infectious Diseases Director Dr. Anthony Fauci, who on

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[2] *All statistics appear in Table 1, including means and standard deviations for these beliefs. However, given a benchmark of 10% for beliefs to be salient in a population (Ajzen & Fishbein, 1980), the percent of people who subscribe to misinformation is important.*

March 11th on Fox News responded to Sean Hannity's request to compare the seasonal flu to the coronavirus by noting, "The mortality for seasonal flu is 0.1 [percent]" and the coronavirus is "10 times more lethal than the seasonal flu. You gotta make sure that people understand that!" (Fox News, 2020). Importantly, in that interview on Hannity's top-rated Fox program, the host repeatedly vouched for Fauci's credibility.

Among the reasons that credible sources should place such information in conservative media venues is that conservative talk radio listeners and Fox viewers tend to be older, and as such part of the group most susceptible to SARS-CoV-2 complications (cdc.gov). Fauci's statement directly rebutted a canard that had been trafficked in conservative media where Rush Limbaugh said, "I'm dead right on this. The coronavirus is the common cold, folks" (Limbaugh, February 24 2020), and that "The fatality rate of this virus is less than the flu, far less than the flu. But look at how it's been hyped" (Limbaugh, February 25, 2020). Furthermore, "medical contributor" Dr. Mark Siegel stated on Sean Hannity's top-rated Fox program, "the virus should be compared to the flu. Because at worst, at worst, worst case scenario it could be the flu" (Fox News, March 6, 2020).

Newspapers: Take down paywalls on SARS-CoV-2 coverage
Our finding that reading mainstream print is associated with higher levels of knowledge should incentivize newspapers to follow the lead of outlets such as the Washington Post and New York Times and eliminate the paywall on their coronavirus coverage. Readers who appreciate this contribution to public health might respond by subscribing or, in the case of the Guardian, which does not have a paywall, by donating to that organization.

Findings
The last panel of Table 1 presents the means and standard deviations for exposure to different sources of information. Table 2 presents the associations of respondents' beliefs in the information/misinformation of interest with media exposure. All associations stem from a multiple-regression analysis with controls for political party, political ideology, education, gender, and age. Figures 1-4 present significant regression lines corresponding to the significant media predictors in Table 2. All simple correlations appear in the Appendix and indicate relations among party, ideology, demographic, and media predictors and hence the need to control for them through multiple regressions.

Familiarity with SARS-CoV-2
Familiarity with the novel coronavirus was high. Ninety-six percent of the sample reported having heard about it.

A. Level of Information: Low Levels of Information about Lethality and Prevention and High Levels of Misinformation
- The public's sense of the relative risks of death from the coronavirus as opposed to the flu was wanting. Although 39% knew that a person with coronavirus was more likely to die as a result than was a person who had contracted the seasonal flu, 38% thought that one disease was as likely as the other to result in death, 13% considered the seasonal flu more deadly, and 8% endorsed "it depends" (see Table 1).
- There were gaps in information about the need for hand washing and avoiding close contact with those showing respiratory symptoms (the concept of social distancing was not yet prevalent in the national dialogue), as well as misinformation that taking vitamin C is preventative (see Table 1). Specifically, 13% believed that it was probably or definitely false or

were unsure whether hand washing and avoiding contact with symptomatic people prevent infection. Moreover, 21% reported that it is definitely or probably true that taking vitamin C can prevent a person from being infected with coronavirus (see Table 1). An additional twenty six percent were unsure.

B. Partisanship: Democrats and Republicans Differed in Perceived SARS-CoV-2 Lethality

- Democrats were more likely than Republicans to know that the coronavirus is more lethal than the flu (see Table 2).
- Republicans also were more likely to believe that the CDC was exaggerating the threat of the coronavirus to hurt President Donald Trump (see Table 2).

C. Associations between Media Exposure and Information/Misinformation While Taking Ideology and Party into Account

1C. Mainstream Broadcast and Print Media Exposure Correlates with More Information and Less Misinformation Even after Taking Ideology and Party into Account

- Exposure to mainstream broadcast and cable correlated positively with reporting that the novel coronavirus is more lethal than the flu (for a similar mainstream media effect, see Stecula, Kuru, & Jamieson, 2020) (see Table 2 and Figure 1).
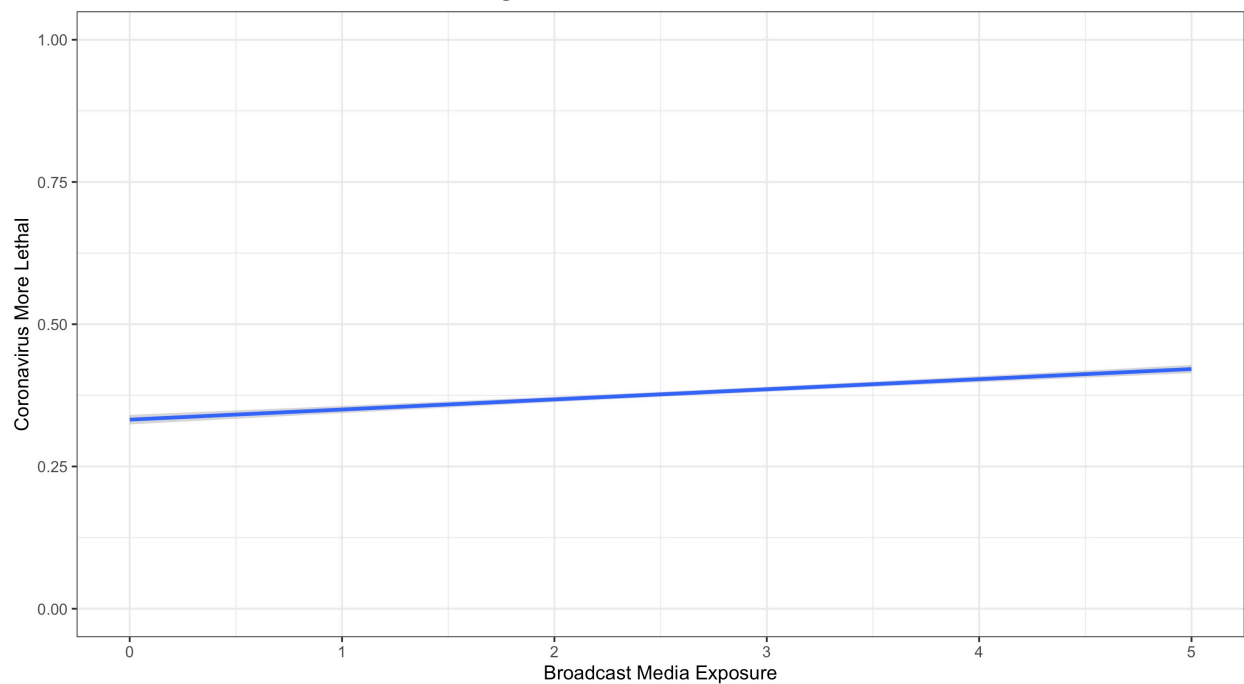
Figure 1. *Association between Mainstream Broadcast Media Exposure and Perceived Lethality of SARS-CoV-2*

- Exposure to mainstream print was positively associated with holding more accurate beliefs about prevention of infection with SARS-CoV-2. Specifically, exposure to sources such as the Associated Press, The New York Times, the Washington Post, or the Wall Street Journal was positively associated with accurately believing that regular hand washing and avoiding contact with symptomatic people prevent infection (see Table 2 and Figure 2).
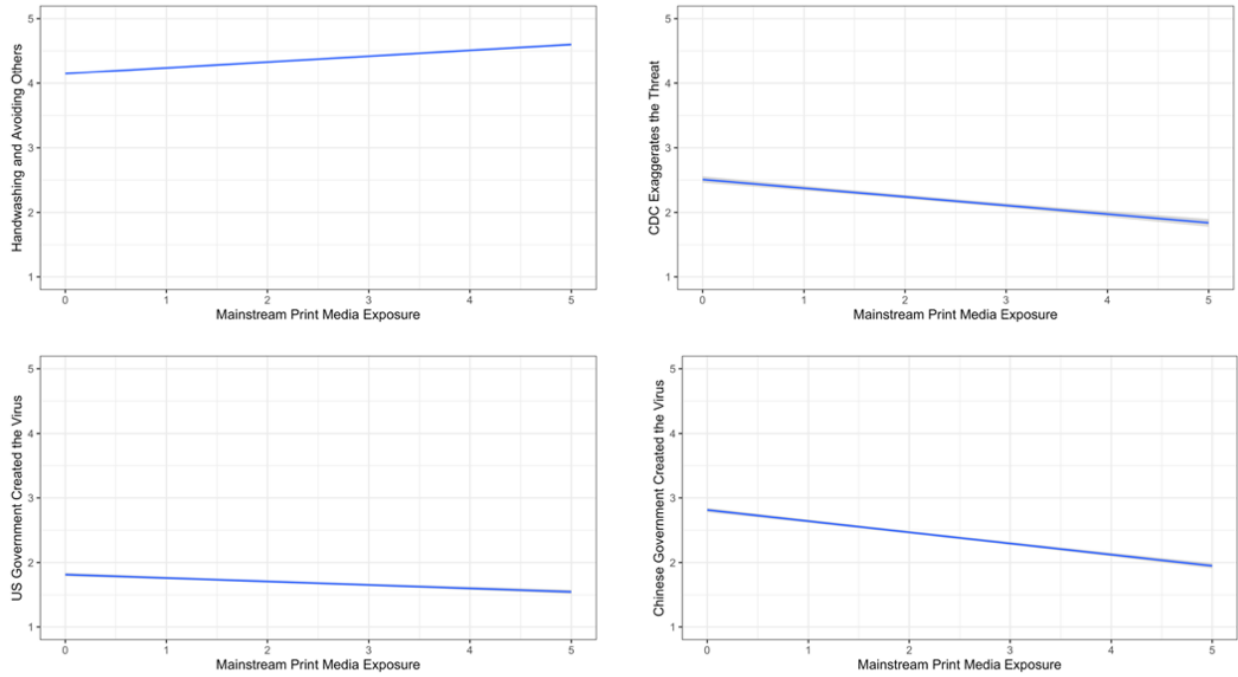
Figure 2. Associations between Mainstream Print Media Exposure and Information/Misinformation

- Exposure to mainstream print was negatively associated with the beliefs that taking vitamin C can prevent infection, some in the CDC were exaggerating the threat to harm Trump, and the virus is a bioweapon created by the Chinese government (see Table 2 and Figure 2).

2C. Conservative Media Exposure Correlates with Higher Levels of Misinformation

- Use of conservative media (sources such as Fox News and Rush Limbaugh) correlated with beliefs in the malign underlying motives of some at the CDC and the Chinese origin of the virus (see Table 2 and Figure 3).
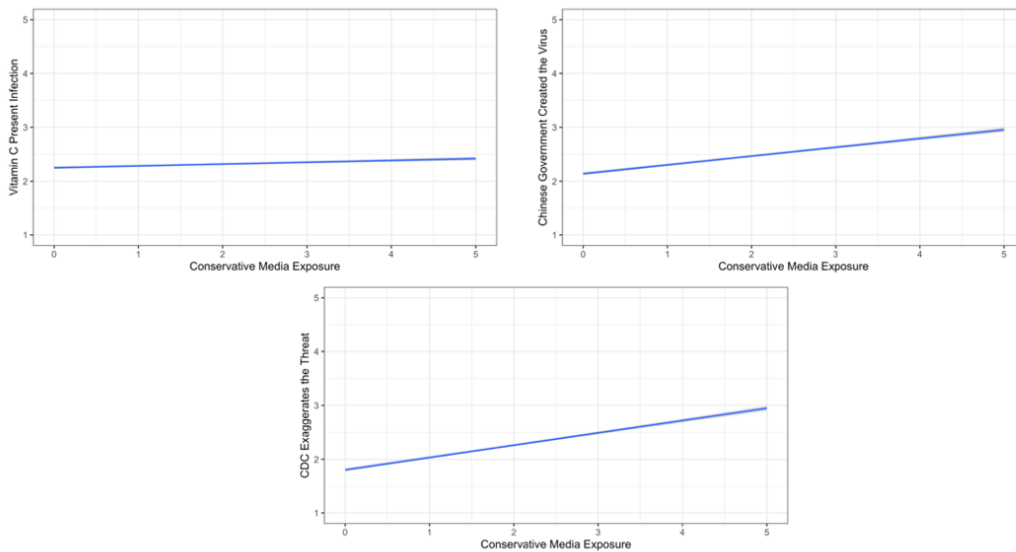
Figure 3. *Associations between Conservative Print Media Exposure and Misinformation*

- Furthermore, exposure to conservative media correlated with unwarranted confidence in vitamin C consumption as a means of preventing infection by SARS-CoV-2 (see Table 2 and Figure 3).

3C. Social Media Exposure Correlates with Lower Levels of Information and Higher Levels of Misinformation

- Exposure to outlets such as the web aggregators Google News and Yahoo News correlated with lower belief in the efficacy of regular hand washing and avoiding contact with symptomatic individuals (see Table 2 and Figure 4).
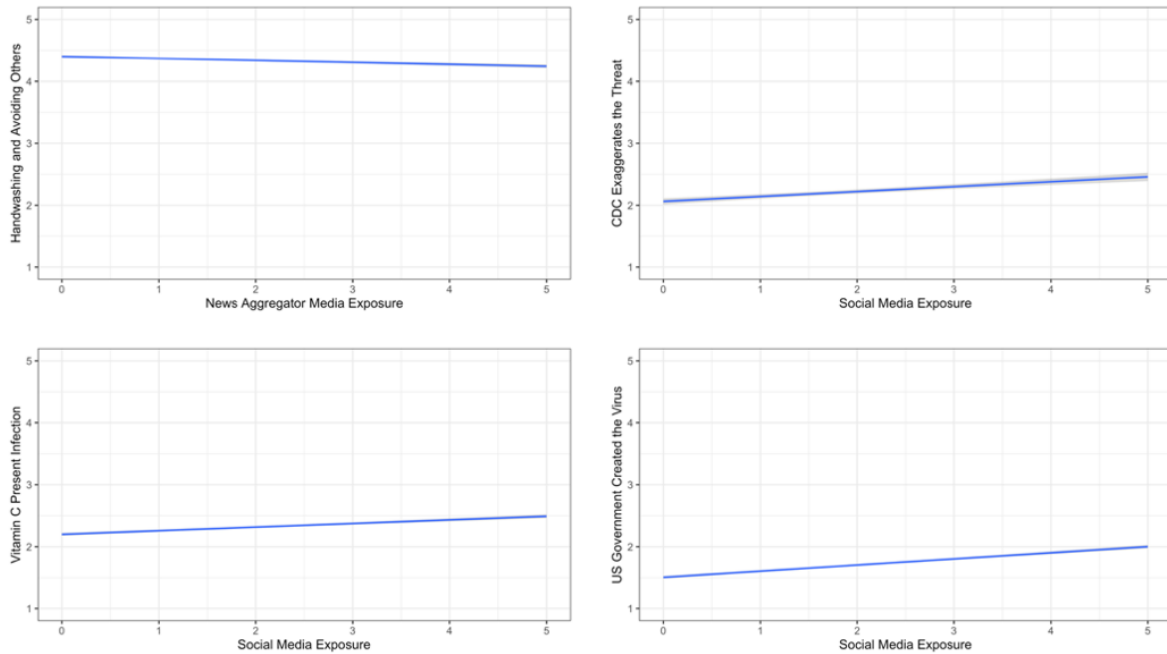
Figure 4. *Associations between Yahoo or Google News Aggregators or Social Media Exposure and Information/Misinformation3.*

- Exposure to sources such as Facebook, Twitter or YouTube was positively correlated with belief in the efficacy of vitamin C, the belief that the CDC was exaggerating the threat to harm President Trump, and the belief that the virus was created by the US government (see Table 2 and Figure 4).

Table 1. *Information, Misinformation, and Media Use.*

Items	Statistics	
	Frequency	%
Reports that the novel coronavirus is more lethal than the flu	390	39
Do you believe this is…?		
Regular hand washing and avoiding people with symptoms		
Definitely false	26	3
Probably false	29	3

Items	Statistics	
Not sure	74	7
Probably true	364	36
Definitely true	512	51
Taking vitamin C		
Definitely false	295	30
Probably false	235	23
Not sure	260	26
Probably true	194	19
Definitely true	18	2
The CDC exaggerate the danger posed by the virus to hurt Trump		
Definitely false	370	37
Probably false	242	24
Not sure	201	20
Probably true	128	13
Definitely true	59	6
The U.S. government created the virus		
Definitely false	547	55
Probably false	222	22
Not sure	134	13
Probably true	77	8
Definitely true	21	2
The Chinese government created the virus		
Definitely false	260	26
Probably false	272	27
Not sure	247	25
Probably true	181	18
Definitely true	47	5

Do you believe this is…? (1: definitely false to 5: definitely true)		
	M	*SD*
Regular hand washing and avoiding people with symptoms	*4.30*	*0.92*
Taking vitamin C	2.41	1.15
The CDC exaggerate the danger posed by the virus to hurt Trump	2.27	1.24
The U.S. government created the virus	1.80	1.07
The Chinese government created the virus	2.49	1.19

How much information do you get from the following sources? (0: a bit to 5: a lot)		
	M	*SD*
Mainstream Print Media (Associated Press, the New York Times, the Washington Post, or the Wall Street Journal)	2.16	1.76
Conservative Media (Fox News, Rush Limbaugh, Breitbart News, One, America News, or The Drudge Report)	1.74	1.82
Mainstream Broadcast Media (ABC News, CBS News, or NBC News)	2.72	1.72

Items	Statistics	
Liberal Media (MSNBC, Bill Maher, or Huffington Post)	1.62	1.68
Online News Aggregators (Google News or Yahoo News)	1.90	1.72
Social Media (Facebook, Twitter, or YouTube)	2.19	1.84

Results are weighted to approximate the US population.

Table 2. *Predicting Beliefs from Sources of Information.*

Predictors	Corona is more lethal than the flu[1]		Beliefs				
	Logistic Regression	Linear Regression	Regular hand washing and avoiding people with symptoms	Taking vitamin C	The CDC exaggerate the danger	The US government created the virus	The Chinese government created the virus
Non-media variables							
Political party	-0.20*	-0.10*	0.05	-0.08	0.15***	-0.02	0.05
Conservative political views	0.07	0.06	-0.02	-0.03	0.08*	-0.05	0.05
Education	0.02	0.03	0.12***	-0.10**	-0.11***	-0.13***	-0.10**
Age	-0.01	-0.03	0.01	-0.12**	0	-0.08*	0.04
Female sex	-0.47***	-0.10**	0	0.10**	-0.03	0.04	0.03
Media variables							
Mainstream Print Media (Associated Press, the New York Times, the Washington Post, or the Wall Street Journal)	-0.03	-0.02	0.16***	-0.03	-0.09*	-0.09*	-0.18***
Conservative Media (Fox News, Rush Limbaugh, Breitbart News, One, America News, or The Drudge Report)	-0.02	-0.01	-0.02	0.10**	0.21***	0.01	0.17***
Mainstream Broadcast Media (ABC News, CBS News, or NBC News)	0.10*	0.09**	0.01	0.06	-0.05	-0.07	-0.03
Liberal Media (MSNBC, Bill Maher, or Huffington Post)	-0.06	-0.04	0.02	-0.04	0	0.02	-0.03
	0	0	-0.10**	0.06	0.02	0.05	0.02

Predictors	Corona is more lethal than the flu[1]		Beliefs				
	Logistic Regression	Linear Regression	Regular hand washing and avoiding people with symptoms	Taking vitamin C	The CDC exaggerate the danger	The US government created the virus	The Chinese government created the virus
Online News Aggregators (Google News or Yahoo News)							
Social Media (Facebook, Twitter, or YouTube)	0.03	0.04	0.03	-0.01	0.10**	0.11**	0.11**
R^2	.08	0.02	.05	.05	.18	.07	.14
N	953	953	950	949	947	948	953

Note. *: $p < .05$, **: $p < .01$. ***: $p < .001$. Political party and ideology are scored so that higher numbers represent more conservative choices. Party: -1: democrat, 0: independent, 1: republican. Political ideology: 1(*very liberal*) to 5 (*very conservative*). [1]Responses as to whether corona is more deadly than the flu resulted in a dichotomous variable: 1: chose that it is more deadly, 0: did not choose that it is more deadly. Hence this variable was analyzed with both linear and logistic regressions. For the logistic regression, the Cox & Snell R^2 is reported, along with unstandardized beta weights for the predictors. For linear regressions, coefficients for individual variables are standardized. Results are weighted to approximate the US population.

Table 3. *Description of the Sample*

	Frequency	%
Sex		
Female	488	48
Male	520	52
Age		
18-19	41	4
20-29	170	17
30-39	167	17
40-49	159	16
50-59	156	16
60-69	155	15
70-79	98	10
80+	62	6
Race/Ethnicity		
White Non-Hispanic	625	62
Black Non-Hispanic	116	12
Asian	26	3
Native American/American Indian/Alaskan Native	23	2
Native Hawaiian and Pacific Islander	5	1
White Hispanic	96	10
Black Hispanic	17	2
Unspecified Hispanic	46	5
Mixed	29	3
Refused	24	2
Education		
Less than high school graduate	81	8
High school graduate	304	31
Some college or associate degree	276	28
College	232	23
Postgraduate	103	10
Political party		
Republican	362	36
Independent	126	13
Democrat	520	52
Political views		
Very conservative	143	15
Somewhat conservative	199	21
Moderate	342	35
Somewhat liberal	174	18
Very liberal	113	12

. Results are weighted to approximate the US population.

Methods

The survey was conducted for the Annenberg Public Policy Center at the University of Pennsylvania via telephone by Social Science Research Solutions (SSRS), an independent research company. Interviews were conducted with a sample of **1,008** respondents between March 3 and March 8, 2020. Of the total sample, 701 participants were surveyed by cell phone, and the remaining via landlines. Although the majority of the respondents answered in English, 35 participants completed the survey in Spanish. The margin of error for total respondents is +/-3.57% at the 95% confidence level. Response rate was 3.5%. More information about SSRS can be obtained by visiting www.ssrs.com.

The survey items were developed after extensive pretesting of both the media and the belief measures. First, pilot data conducted during 2019 indicated that the grouping of conservative news outlets was relatively homogeneous in capturing demographically similar audiences. These measures were formally validated by Jamieson and Hilgard (2017). Second, an online pilot survey conducted by SSRS in February 2020 pilot tested four of the belief measures (that hand washing and avoidance of contact with symptomatic others prevented infection; that the virus was created by the Chinese government; that the virus was created by the US government; and that vitamin C prevented infection), which correlated strongly with other conspiracy theories (i.e., Agenda 21, the link between MMR and autism, and the belief that Obama was not born in the US). These pilot data thus provided indication of the construct validity of our belief measures. In addition, the February pilot data showed that the media measures predicted beliefs in theories described in conservative and social media outlets.

The survey first asked whether the respondent had "read, heard, or seen anything about a virus called the coronavirus, also known as COVID-19, first detected in Wuhan, China in December 2019," with the options being "Yes" or "No." To assess information about the risk of coronavirus compared to the seasonal flu, we asked "If someone gets the seasonal flu and another gets the coronavirus, which person do you think is more likely to die from the disease?" Three response options were offered: "The person with seasonal flu"; "the person with coronavirus"; "they are equally likely to die of the disease they have"; "it depends"; and "I don't know."

In addition, of interest to this study were five items assessing respondents' beliefs that: (a) "the ways to prevent infection with the coronavirus include regular hand washing and avoiding those showing symptoms of respiratory illness"; (b) "taking vitamin C can prevent a person from being infected with the coronavirus"; (c) "some in the U.S. Centers for Disease Control and Prevention, also known as the CDC, are exaggerating the danger posed by the coronavirus in order to damage the Trump presidency"; (d) "the U.S. government created the coronavirus"; and (e) "the coronavirus was created by the Chinese government as a biological weapon." Participants were read a statement, after which the interviewer asked, "Do you believe this is…?". Participants received the following options: 1. "Definitely true," 2. "Probably true," 3. "Probably false," 4. "Definitely false," 8: "Not sure." Refusals were coded as 9 and scores were reversed so that higher values indicate more agreement: 1 indicated "definitely false" and 5 indicated "definitely true." "Not Sure" (8) was recoded 3 to reflect the middle point[3].

We also measured sources of information. Specifically, on a scale from 0 (*no information*) to 5 (*a lot of information*), participants were asked to report how much information they receive from sources such as: (a) "Associated Press, The New York Times, the Washington Post, or the Wall Street Journal," which we consider mainstream print outlets; (b) "Fox News, Rush Limbaugh, Breitbart News, One America News, or The Drudge Report," which were considered conservative outlets; (c) "MSNBC, Bill Maher, or Huffington Post," which we treat as liberal sources; (d) "ABC News, CBS News, or NBC News," which were considered mainstream broadcast; (e) "Google News or Yahoo News," which were considered social media news aggregators; and (f) "Facebook, Twitter, or YouTube," which were considered social media sources.

Table 3 describes the sample, and shows not only that it is similar to the US population in sex, age, race, ethnicity, and education, but also that it had similar percentages of self-reported conservatives, moderates, and liberals.

Acknowledgements

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Ethics
The research protocol employed was approved as exempt research by the University of Pennsylvania Institutional Review Board. For the data and code, see https://osf.io/cny76/

This article was modified on April 28, 2020. The changes were due to an error in the recoding of demographics which was detected by a reader. Most of the changes were small variations in tables (e.g., regression coefficients, including the ones for education). A correlation between political party and belief in vitamin C being preventative, which had a p < .05, became marginal, leading to the exclusion of this bullet: "Additionally, Republicans were more likely to believe that the Chinese government created the virus as a bioweapon (see Table 2)."

Appendix

Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Corona more lethal	1															
2. Hand washing and avoiding	-.076*	1														
3. Taking vitamin C	0	-.070*	1													
4. The CDC exaggerate	-.093**	-.044	.120**	1												
5. US government	.027	-.205**	.240**	.175**	1											
6. Chinese government	.037	-.117**	.162**	.339**	.331**	1										
7. Political party	-.063*	-.009	-.071*	.283**	-.015	.190**	1									
8. Conservative political views	.064*	.004	-.094**	.081*	.031	.070*	.218**	1								
9. Education	.010	.049	.009	-.009	-.026	-.025	.013	.073*	1							
10. Age	-.036	.008	-.112**	.018	-.144**	.037	.129**	.084**	.052	1						
11. Female sex	-.075*	.016	.092**	-.013	.031	.006	-.149**	-.049	-.007	.041	1					
12. Mainstream media	.007	.161**	-.001	-.158**	-.087**	-.216**	-.225**	-.059	.070*	-.106**	.028	1				
13. Conservative media	-.013	-.029	.062	.292**	.01	.231**	.352**	.135**	.054	.194**	-.016	-.026	1			
14. Mainstream broadcast	.05	.043	.041	-.102**	-.091**	-.087**	-.196**	-.137**	.101**	.198**	.098*	.312**	.070*	1		
15. Liberal media	-.002	.058	.022	-.084**	.018	-.090**	-.239**	-.036	.098**	.034	.075*	.474**	.079*	.395**	1	
16. Google or Yahoo News	.037	-.045	.102**	.073*	.111**	.05	-.031	-.102**	-.047	-.208**	.013	.212**	.124**	.079*	.246**	1
17. Social media	.053	-.012	.102**	.126**	.152**	.102**	-.054	-.021	0	-.391**	.082*	.151**	.079*	.068*	.127**	.483**

*: $p < .05$. **: $p < .01$. For ease of comparability, reports that the novel coronavirus is more lethal than the flu, which is a dummy variable, was analyzed using Pearson correlations as well. However, like in Table 2, logistic regressions led to the same variables being statistically significant and the same pattern of findings. Results are weighted to approximate US population.

4/27/20 8:37:00 PM
coronovirusqn.doc
Job #T8809
March 3, 2020
CORONAVIRUS

RECORD ALL ROTATE VARIABLES

Now I have some questions for you for a research study on issues related to health on behalf of the […]. You have been selected as part of a cross-section of American adults. I want to remind you that your participation in this study is completely voluntary and all responses will remain confidential in a password protected file in the […]. Your individual responses will never be released as findings will be reported in the aggregate. All data we collect will be de-identified, and could be stored and distributed for future research. The information that we gather may help us to provide invaluable data on a variety of health issues.

If there is a question you would rather not answer, then we will move on.

(IF NECESSARY) If you have any questions regarding this research or with regard to your participation, you can contact [….]

CORO1. Have you read, heard, or seen anything about a virus called the coronavirus, also known as COVID-19, first detected in Wuhan (WOO-han) China in December 2019?

1 Yes
2 No
8 (DO NOT READ) Don't know
9 (DO NOT READ) Refused

I'm going to read you some statements. For each one, please tell me if you believe it is true, false or if you aren't sure.

(ROTATE CORO2 AND CORO4)

COROQ2. The US government created the coronavirus.
Do you believe this is (READ LIST)?

(ROTATE 1-4/4-1 IN THE SAME ORDER FOR ALL)
1 Definitely true
2 Probably true
3 Probably false
4 Definitely false
8 Or are you not sure
9 (DO NOT READ) Refused

CORO3. Taking vitamin C can prevent a person from being infected with the coronavirus.
Do you believe this is (READ LIST)?

(ROTATE 1-4/4-1 IN THE SAME ORDER FOR ALL)
1 Definitely true
2 Probably true
3 Probably false
4 Definitely false
8 Or are you not sure
9 (DO NOT READ) Refused

CORO4. The coronavirus was created by the Chinese government as a biological weapon.
Do you believe this is (READ LIST)?

(ROTATE 1-4/4-1 IN THE SAME ORDER FOR ALL)
1 Definitely true
2 Probably true
3 Probably false
4 Definitely false
8 Or are you not sure
9 (DO NOT READ) Refused

CORO5. The ways to prevent infection with the coronavirus include regular hand washing and avoiding those showing symptoms of respiratory (RES-PER-ATORY) illness.
Do you believe this is (READ LIST)?

(ROTATE 1-4/4-1 IN THE SAME ORDER FOR ALL)
1 Definitely true
2 Probably true
3 Probably false
4 Definitely false
8 Or are you not sure
9 (DO NOT READ) Refused

CORO6. Some in the U.S. Centers for Disease Control and Prevention, also known as the

C-D-C, are exaggerating the danger posed by the coronavirus in order to damage the Trump presidency.
Do you believe this is (READ LIST)?

(ROTATE 1-4/4-1 IN THE SAME ORDER FOR ALL)
1 Definitely true
2 Probably true
3 Probably false
4 Definitely false
8 Or are you not sure
9 (DO NOT READ) Refused

CORO7. Some in the U.S. Centers for Disease Control and Prevention, also known as the C-D-C, are exaggerating the extent of the opioid (O-PEA-OYD) epidemic and its consequences in order to further a political agenda. Do you believe this is (READ LIST)?

(ROTATE 1-4/4-1 IN THE SAME ORDER FOR ALL)
    1   Definitely true
    2   Probably true
    3   Probably false
    4   Definitely false
    8   Or are you not sure
    9   (DO NOT READ) Refused

(ROTATE VERBAIGE IN PARENS)
   CORO8. If one person gets the (seasonal flu) and another gets the (coronavirus), which person do you think is more likely to die from the disease: (READ LIST)

(ROTATE IN SAME ORDER AS QUESTION)
    1   The person with seasonal flu
    2   The person with coronavirus
    3   or they are equally likely to die of the disease they have
    4   (DO NOT READ) Depends
    8   (DO NOT READ) Don't know
    9   (DO NOT READ) Refused

CORO11. There are a number of threats America faces today that might affect the quality of our lives. Please indicate how much you agree with the following statements that compare the challenges of the coronavirus the country faces now to that of other risks the country faces now. (INSERT ITEM). Do you: (READ LIST)?

(SHOW FOR ITEMS B-D) (INSERT ITEM). Do you: (READ LIST)?

1   Strongly agree
2   Agree
3   Somewhat agree
4   Somewhat disagree
5   Disagree
6   Strongly disagree
9   (DO NOT READ) Refused

(DO NOT ROTATE)
a.   I feel the current coronavirus epidemic poses a greater threat to my future quality of life than does the threat of immigration from Mexico.
b.   I feel the current coronavirus epidemic poses a greater threat to my future quality of life than does the threat of large natural disasters.
c.   I feel the current coronavirus epidemic poses a greater threat to my future quality of life than does the threat of terrorism.
d.   I feel the current coronavirus epidemic poses a greater threat to my future quality of life than does the threat of global warming.

COR09   [PN: SHOW FOR FIRST ITEM ONLY]: How much information do you get from each of the following sources?

[PN: SHOW FOR FIRST ITEM ONLY]: Use a scale from 0 to 5, where 0 means you get "NO information" from these sources, and 5 means you get "A LOT of information" from these sources. Of course, you can use any number between 0 and 5. How much INFORMATION do you get from (INSERT ITEM)?

[PN: SHOW FOR SECOND ITEM ONLY]: How much INFORMATION do you get from (INSERT ITEM)? Use a scale from 0 to 5, where 0 means you get "NO information" from these sources, and 5 means you get "A LOT of information" from these sources. Of course, you can use any number between 0 and 5.

[PN: SHOW FOR THE REMAINING ITEMS]: How much INFORMATION do you get from (INSERT ITEM)?

[PN: SHOW FOR THE REMAINING ITEMS]: (IF NECESSARY: Use a scale from 0 to 5, where 0 means you get "NO information" from these sources, and 5 means you get "A LOT of information" from these sources. Of course, you can use any number between 0 and 5.)

0   0- No information
1   1
2   2
3   3
4   4

5   5 – A lot of information
8   (DO NOT READ) Don't know
9   (DO NOT READ) Refused

(SCRAMBLE ROTATE)
   a.   Sources such as Fox News, Rush Limbaugh (Lim-BAH), Breitbart (Bright – bart) News, One America News or The Drudge Report
   b.   Sources such as MSNBC, Bill Maher (MAR), or Huffington Post
   c.   Sources such as ABC News, CBS News, or NBC News
   d.   Sources such as Google News or Yahoo News
   e.   Sources such as Facebook, Twitter, or YouTube
   f.   Sources such as Associated Press, The New York Times, the Washington Post, or the Wall Street Journal

Exhibit C

STATE OF WASHINGTON

OFFICE OF THE GOVERNOR

P.O. Box 40002 • Olympia, Washington 98504-0002 • (360) 902-4111 • www.governor.wa.gov

PROCLAMATION BY THE GOVERNOR
AMENDING PROCLAMATION 20-05

20-25

STAY HOME – STAY HEALTHY

WHEREAS, on February 29, 2020, I issued Proclamation 20-05, proclaiming a State of Emergency for all counties throughout the state of Washington as a result of the coronavirus disease 2019 (COVID-19) outbreak in the United States and confirmed person-to-person spread of COVID-19 in Washington State; and

WHEREAS, as a result of the continued worldwide spread of COVID-19, its significant progression in Washington State, and the high risk it poses to our most vulnerable populations, I have subsequently issued amendatory Proclamations 20-06, 20-07, 20-08, 20-09, 20-10, 20-11, 20-12, 20-13, 20-14, 20-15, 20-16, 20-17, 20-18, 20-19, 20-20, 20-21, 20-22, 20-23, and 20-24, exercising my emergency powers under RCW 43.06.220 by prohibiting certain activities and waiving and suspending specified laws and regulations; and

WHEREAS, the COVID-19 disease, caused by a virus that spreads easily from person to person which may result in serious illness or death and has been classified by the World Health Organization as a worldwide pandemic, has broadly spread throughout Washington State, significantly increasing the threat of serious associated health risks statewide; and

WHEREAS, there are currently at least 2,221 cases of COVID-19 in Washington State and, tragically, 110 deaths of Washingtonians associated with COVID-19; and

WHEREAS, models predict that many hospitals in Washington State will reach capacity or become overwhelmed with COVID-19 patients within the next several weeks unless we substantially slow down the spread of COVID-19 throughout the state; and

WHEREAS, hospitalizations for COVID-19 like illnesses are significantly elevated in all adults, and a sharply increasing trend in COVID-19 like illness hospitalizations has been observed for the past three (3) weeks; and

WHEREAS, the worldwide COVID-19 pandemic and its progression in Washington State continues to threaten the life and health of our people as well as the economy of Washington State, and remains a public disaster affecting life, health, property or the public peace; and

WHEREAS, the Washington State Department of Health continues to maintain a Public Health Incident Management Team in coordination with the State Emergency Operations Center and other supporting state agencies to manage the public health aspects of the incident; and

WHEREAS, the Washington State Military Department Emergency Management Division, through the State Emergency Operations Center, continues coordinating resources across state government to support the Department of Health and local health officials in alleviating the impacts to people, property, and infrastructure, and continues coordinating with the Department of Health in assessing the impacts and long-term effects of the incident on Washington State and its people.

NOW, THEREFORE, I, Jay Inslee, Governor of the state of Washington, as a result of the above-noted situation, and under Chapters 38.08, 38.52 and 43.06 RCW, do hereby proclaim: that a State of Emergency continues to exist in all counties of Washington State; that Proclamation 20-05 and all amendments thereto remain in effect as otherwise amended; and that Proclamations 20-05, 20-07, 20-11, 20-13, and 20-14 are amended and superseded by this Proclamation to impose a Stay Home – Stay Healthy Order throughout Washington State by prohibiting all people in Washington State from leaving their homes or participating in social, spiritual and recreational gatherings of any kind regardless of the number of participants, and all non-essential businesses in Washington State from conducting business, within the limitations provided herein.

I again direct that the plans and procedures of the Washington State Comprehensive Emergency Management Plan be implemented throughout state government. State agencies and departments are directed to continue utilizing state resources and doing everything reasonably possible to support implementation of the Washington State Comprehensive Emergency Management Plan and to assist affected political subdivisions in an effort to respond to and recover from the COVID-19 pandemic.

I continue to order into active state service the organized militia of Washington State to include the National Guard and the State Guard, or such part thereof as may be necessary in the opinion of The Adjutant General to address the circumstances described above, to perform such duties as directed by competent authority of the Washington State Military Department in addressing the outbreak. Additionally, I continue to direct the Department of Health, the Washington State Military Department Emergency Management Division, and other agencies to identify and provide appropriate personnel for conducting necessary and ongoing incident related assessments.

FURTHERMORE, based on the above situation and under the provisions of RCW 43.06.220(1)(h), to help preserve and maintain life, health, property or the public peace, and to implement the Stay Home—Stay Healthy Order described above, I hereby impose the following necessary restrictions on participation by all people in Washington State by prohibiting each of the following activities by all people and businesses throughout

Washington State, which prohibitions shall remain in effect until midnight on April 6, 2020, unless extended beyond that date:

1. **All people in Washington State shall immediately cease leaving their home or place of residence except: (1) to conduct or participate in essential activities, and/or (2) for employment in essential business services.** This prohibition shall remain in effect until midnight on April 6, 2020, unless extended beyond that date.

   To implement this mandate, I hereby order that all people in Washington State are immediately prohibited from leaving their home or place of residence except to conduct or participate in (1) essential activities, and/or (2) employment in providing essential business services:

   a. **Essential activities** permitted under this Proclamation are limited to the following:
      1) **Obtaining necessary supplies and services** for family or household members and pets, such as groceries, food and supplies for household consumption and use, supplies and equipment needed to work from home, and products necessary to maintain safety, sanitation and essential maintenance of the home or residence.
      2) **Engaging in activities essential for the health and safety** of family, household members and pets, including things such as seeking medical or behavioral health or emergency services and obtaining medical supplies or medication.
      3) **Caring for** a family member, friend, or pet in another household or residence, and to transport a family member, friend or their pet for essential health and safety activities, and to obtain necessary supplies and services.
      4) **Engaging in outdoor exercise activities**, such as walking, hiking, running or biking, but only if appropriate social distancing practices are used.

   b. **Employment in essential business services** means an essential employee performing work for an essential business as identified in the "Essential Critical Infrastructure Workers" list, or carrying out minimum basic operations (as defined in Section 3(d) of this Order) for a non-essential business.

   c. **This prohibition shall not apply to** individuals whose homes or residences are unsafe or become unsafe, such as victims of domestic violence. These individuals are permitted and urged to leave their homes or residences and stay at a safe alternate location.

   d. **This prohibition also shall not apply to** individuals experiencing homelessness, but they are urged to obtain shelter, and governmental and other entities are strongly encouraged to make such shelter available as soon as possible and to the maximum extent practicable.

e. For purposes of this Proclamation, homes or residences include hotels, motels, shared rental units, shelters, and similar facilities.

2. **All people in Washington State shall immediately cease participating in all public and private gatherings and multi-person activities for social, spiritual and recreational purposes, regardless of the number of people involved, except as specifically identified herein.** Such activity includes, but is not limited to, community, civic, public, leisure, faith-based, or sporting events; parades; concerts; festivals; conventions; fundraisers; and similar activities. This prohibition also applies to planned wedding and funeral events. This prohibition shall remain in effect until midnight on April 6, 2020, unless extended beyond that date.

    To implement this mandate, I hereby order that all people in Washington State are immediately prohibited from participating in public and private gatherings of any number of people for social, spiritual and recreational purposes. **This prohibition shall not apply to** activities and gatherings solely including those people who are part of a single household or residential living unit.

3. **Effective midnight on March 25, 2020, all non-essential businesses in Washington State shall cease operations except for performing basic minimum operations. All essential businesses are encouraged to remain open and maintain operations, but must establish and implement social distancing and sanitation measures established by the United States Department of Labor or the Washington State Department of Health Guidelines.** This prohibition shall remain in effect until midnight on April 8, 2020, unless extended beyond that date.

    To implement this mandate, I hereby order that, effective midnight on March 25, 2020, all non-essential businesses in Washington State are prohibited from conducting all activities and operations except minimum basic operations.

    a. **Non-essential businesses** are strongly encouraged to immediately cease operations other than performance of basic minimum operations, but must do so no later than midnight on March 25, 2020.
    b. **Essential businesses** are prohibited from operating under this Proclamation unless they establish and implement social distancing and sanitation measures established by the United States Department of Labor's Guidance on Preparing Workplaces for COVID-19 at https://www.osha.gov/Publications/OSHA3990.pdf and the Washington State Department of Health Workplace and Employer Resources & Recommendations at https://www.doh.wa.gov/Coronavirus/workplace.
    c. **This prohibition does not apply to** businesses consisting exclusively of employees or contractors performing business activities at their home or residence, and who do not engage in in-person contact with clients.

d. For purposes of this Proclamation, minimum basic operations are the minimum activities necessary to maintain the value of the business' inventory, preserve the condition of the business' physical plant and equipment, ensure security, process payroll and employee benefits, facilitate employees of the business being able to continue to work remotely from their residences, and related functions.

This Proclamation shall not be construed to prohibit working from home, operating a single owner business with no in-person, on-site public interaction, or restaurants and food services providing delivery or take-away services, so long as proper social distancing and sanitation measures are established and implemented.

No business pass or credentialing program applies to any activities or operations under this Proclamation.

Violators of this of this order may be subject to criminal penalties pursuant to RCW 43.06.220(5).

Signed and sealed with the official seal of the state of Washington on this 23rd day of March, A.D., Two Thousand and Twenty at Olympia, Washington.

By:

_____/s/_____
Jay Inslee, Governor

BY THE GOVERNOR:

_____/s/_____
Secretary of State

PROCLAMATION BY THE GOVERNOR
AMENDING PROCLAMATIONS 20-05 AND 20-25

20-25.1
EXTENDING STAY HOME – STAY HEALTHY
TO MAY 4, 2020

WHEREAS, on February 29, 2020, I issued Proclamation 20-05, proclaiming a State of Emergency for all counties throughout Washington state as a result of the coronavirus disease 2019 (COVID-19) outbreak in the United States and confirmed person-to-person spread of COVID-19 in Washington State; and

WHEREAS, as a result of the continued worldwide spread of COVID-19, its significant progression in Washington State, and the high risk it poses to our most vulnerable populations, I have subsequently issued amendatory Proclamations 20-06, 20-07, 20-08, 20-09, 20-10, 20-11, 20-12, 20-13, 20-14, 20-15, 20-16, 20-17, 20-18, 20-19, 20-20, 20-21, 20-22, 20-23, 20-24, 20-25, 20-26, 20-27, 20-28, 20-29, 20-30, 20-31, 20-32, 20-33, 20-34, 20-35, 20-36, 20-37, 20-38, and 20-39, exercising my emergency powers under RCW 43.06.220 by prohibiting certain activities and waiving and suspending specified laws and regulations, including issuance of Proclamation 20-25, Stay Home – Stay Healthy, prohibiting all people in Washington State from leaving their homes or participating in social, spiritual and recreational gatherings of any kind regardless of the number of participants, and all non-essential businesses in Washington State from conducting business, within the limitations therein; and

WHEREAS, the COVID-19 disease, caused by a virus that spreads easily from person to person which may result in serious illness or death and has been classified by the World Health Organization as a worldwide pandemic, has broadly spread throughout Washington State and is a significant health risk to all of our people, especially members of our most vulnerable populations; and

WHEREAS, since Proclamation 20-25 was issued on March 23, the number of confirmed cases and deaths in Washington State has more than doubled, and there are currently at least 5,984 cases of COVID-19 in Washington State with 247 associated deaths; and, furthermore, models predict that many hospitals in Washington State will reach capacity or become overwhelmed with COVID-19 patients within the next few weeks unless we significantly slow its spread throughout the state; and

WHEREAS, hospitalizations for COVID-like illnesses have been sharply increasing for the past month, and a large surge in the number of serious COVID-19 infections will compromise the ability of our health care system to deliver necessary health care services; and

WHEREAS, these conditions necessitate that to protect the health and safety of all Washingtonians, the stringent restrictions imposed on the people of Washington State in Proclamation 20-25 must be continued until May 4, 2020; and

WHEREAS, the worldwide COVID-19 pandemic and its progression in Washington State continues to threaten the life and health of our people as well as the economy of Washington State, and remains a public disaster affecting life, health, property or the public peace; and

WHEREAS, the Washington State Department of Health continues to maintain a Public Health Incident Management Team in coordination with the State Emergency Operations Center and other supporting state agencies to manage the public health aspects of the incident; and

WHEREAS, the Washington State Military Department Emergency Management Division, through the State Emergency Operations Center, continues coordinating resources across state government to support the Department of Health and local health officials in alleviating the impacts to people, property, and infrastructure, and continues coordinating with the Department of Health in assessing the impacts and long-term effects of the incident on Washington State and its people.

NOW, THEREFORE, I, Jay Inslee, Governor of the state of Washington, as a result of the above-noted situation, and under Chapters 38.08, 38.52 and 43.06 RCW, do hereby proclaim and order that a State of Emergency continues to exist in all counties of Washington State, that Proclamation 20-05 and all amendments thereto remain in effect as otherwise amended, and that, to help preserve and maintain life, health, property or the pubic peace pursuant to RCW 43.06.220(1)(h), Proclamation 20-25 (Stay Home – Stay Healthy) is amended to extend all of its provisions and each expiration date therein to 11:59 PM on May 4, 2020. All other provisions of Proclamation 20-25 shall remain in full force and effect.

I again direct that the plans and procedures of the Washington State Comprehensive Emergency Management Plan be implemented throughout state government. State agencies and departments are directed to continue utilizing state resources and doing everything reasonably possible to support implementation of the Washington State Comprehensive Emergency Management Plan and to assist affected political subdivisions in an effort to respond to and recover from the COVID-19 pandemic.

I continue to order into active state service the organized militia of Washington State to include the National Guard and the State Guard, or such part thereof as may be necessary in the opinion of The Adjutant General to address the circumstances described above, to perform such duties as directed by competent authority of the Washington State Military Department in addressing the outbreak. Additionally, I continue to direct the Department of Health, the Washington State Military Department Emergency Management Division, and other agencies to identify and provide appropriate personnel for conducting necessary and ongoing incident related assessments.

All persons are again reminded that no business pass or credentialing program or requirement applies to any activities or operations under this Proclamation.

Violators of this of this order may be subject to criminal penalties pursuant to RCW 43.06.220(5).

Signed and sealed with the official seal of the state of Washington on this 2nd day of April, A.D., Two Thousand and Twenty at Olympia, Washington.

By:

_____/s/_____
Jay Inslee, Governor

BY THE GOVERNOR:

_____/s/_____
Secretary of State

PROCLAMATION BY THE GOVERNOR
AMENDING PROCLAMATIONS 20-05, 20-25 AND 20-25.1

20-25.2

ADJUSTING
STAY HOME – STAY HEALTHY
TO MAY 4, 2020

WHEREAS, on February 29, 2020, I issued Proclamation 20-05, proclaiming a State of Emergency for all counties throughout the state of Washington as a result of the coronavirus disease 2019 (COVID-19) outbreak in the United States and confirmed person-to-person spread of COVID-19 in Washington State; and

WHEREAS, as a result of the continued worldwide spread of COVID-19, its significant progression in Washington State, and the high risk it poses to our most vulnerable populations, I have subsequently issued amendatory Proclamations 20-06 through 20-52, exercising my emergency powers under RCW 43.06.220 by prohibiting certain activities and waiving and suspending specified laws and regulations, including issuance of Proclamation 20-25,and 20-25.1 (Stay Home – Stay Healthy), prohibiting all people in Washington State from leaving their homes or participating in gatherings of any kind regardless of the number of participants, and all non-essential businesses in Washington State from conducting business, within the limitations therein; and

WHEREAS, the COVID-19 disease, caused by a virus that spreads easily from person to person which may result in serious illness or death and has been classified by the World Health Organization as a worldwide pandemic, has broadly spread throughout Washington State and is a significant health risk to all of our people, especially members of our most vulnerable populations; and

WHEREAS, while there are currently at least 13,521 cases of COVID-19 in Washington State with 749 associated deaths, current models predict that we have started to slow its spread throughout the State; and

WHEREAS, Washington State is known for a high level of outdoor recreation on its many trails, parks, lakes, beaches and other outdoor recreational areas, and outdoor recreation is a fundamental part of maintaining physical, emotional and mental health, particularly in a time of great stress;

WHEREAS, these conditions now permit adjustment of some of the prohibitions in Proclamation 20-25 and 20-25.1 to allow for some recreational activities and related employment, while continuing to protect the health and safety of all Washingtonians by retaining the remainder of the prohibitions imposed in Proclamations 20-25 and 20-25.1; and

WHEREAS, the worldwide COVID-19 pandemic and its progression in Washington State continues to threaten the life and health of our people as well as the economy of Washington State, and remains a public disaster affecting life, health, property or the public peace; and

WHEREAS, the Washington State Department of Health continues to maintain a Public Health Incident Management Team in coordination with the State Emergency Operations Center and other supporting state agencies to manage the public health aspects of the incident; and

WHEREAS, the Washington State Military Department Emergency Management Division, through the State Emergency Operations Center, continues coordinating resources across state government to support the Department of Health and local health officials in alleviating the impacts to people, property, and infrastructure, and continues coordinating with the Department of Health in assessing the impacts and long-term effects of the incident on Washington State and its people.

NOW, THEREFORE, I, Jay Inslee, Governor of the state of Washington, as a result of the above-noted situation, and under RCW 38.08, 38.52 and 43.06, do hereby proclaim and order that a State of Emergency continues to exist in all counties of the state, that Proclamation 20-05 and all amendments thereto remain in effect as otherwise amended, and that, to help preserve and maintain life, health, property or the public peace pursuant to RCW 43.06.220(1)(h), Proclamations 20-25 and 20-25.1 (Stay Home – Stay Healthy) are amended to extend all of their provisions, except those specifically listed below and as specifically allowed in the requirements available here, and each expiration date therein, to May 4, 2020:

As of April 27, 2020, in order to prepare for re-opening on May 5, 2020, all employees necessary to operate and maintain day-use activity and trails, including those in state parks and state public lands, state hunting and fishing operations, golf operations, and day-use activities and trails in other public parks and public lands are authorized to return to work; and

As of May 5, 2020, the following outdoor recreational activities, when and where permitted, are authorized to commence so long as participants fully comply with the social distancing and coronavirus related hygiene requirements found here, such as:

- Recreational hunting, fishing, and boating
- Outdoor exercise, including hiking, running, walking and biking
- Golfing
- Day-use activities at public parks and public lands

All other provisions of Proclamation 20-25 and 20-25.1 shall remain in full force and effect.

ADDITIONALLY, except as exempted above, I continue to prohibit all other public and private gatherings and multi-person activities for social, spiritual and recreational purposes, regardless of the number of people involved. Such activity includes, but is not limited to, community, civic, public, leisure, faith-based, or sporting events; parades; concerts; festivals; conventions; fundraisers; team sports activities, and similar activities that involve a gathering of people other than a household unit. This prohibition continues to apply to planned wedding and funeral events.

I again direct that the plans and procedures of the *Washington State Comprehensive Emergency Management Plan* be implemented throughout state government. State agencies and departments are directed to continue utilizing state resources and doing everything reasonably possible to support implementation of the *Washington State Comprehensive Emergency Management Plan* and to assist affected political subdivisions in an effort to respond to and recover from the COVID-19 pandemic.

I continue to order into active state service the organized militia of Washington State to include the National Guard and the State Guard, or such part thereof as may be necessary in the opinion of the Adjutant General to address the circumstances described above, to perform such duties as directed by competent authority of the Washington State Military Department in addressing the outbreak. Additionally, I continue to direct the Department of Health, the Washington State Military Department Emergency Management Division, and other agencies to identify and provide appropriate personnel for conducting necessary and ongoing incident related assessments.

Violators of this of this order may be subject to criminal penalties pursuant to RCW 43.06.220(5). Further, if people fail to comply with the required social distancing and coronavirus hygiene practices while engaging in outdoor recreation, or if the numbers of COVID-19 cases increase, I may be forced to reinstate the prohibition of recreational activities.

Signed and sealed with the official seal of the state of Washington on this 27th day of April, A.D., Two Thousand and Twenty at Olympia, Washington.

By:

_____/s/_____

Jay Inslee, Governor

BY THE GOVERNOR:

_____/s/_____

Secretary of State

STATE OF WASHINGTON

OFFICE OF THE GOVERNOR

P.O. Box 40002 • Olympia, Washington 98504-0002 • (360) 902-4111 • www.governor.wa.gov

PROCLAMATION BY THE GOVERNOR
AMENDING PROCLAMATIONS 20-05, 20-25, 20-25.1, and 20-25.2

20-25.3

ADJUSTING AND EXTENDING
STAY HOME – STAY HEALTHY
TO MAY 31, 2020

Safe Start Washington: Phase I – Re-Opening Washington

WHEREAS, on February 29, 2020, I issued Proclamation 20-05, proclaiming a State of Emergency for all counties throughout the state of Washington as a result of the coronavirus disease 2019 (COVID-19) outbreak in the United States and confirmed person-to-person spread of COVID-19 in Washington State; and

WHEREAS, as a result of the continued worldwide spread of COVID-19, its significant progression in Washington State, and the high risk it poses to our most vulnerable populations, I have subsequently issued amendatory Proclamations 20-06 through 20-52, exercising my emergency powers under RCW 43.06.220 by prohibiting certain activities and waiving and suspending specified laws and regulations, including issuance of Proclamations 20-25, 20-25.1, and 20-25.2 (Stay Home – Stay Healthy), prohibiting all people in Washington State from leaving their homes or participating in social, spiritual or recreational gatherings of any kind regardless of the number of participants, and all non-essential businesses in Washington State from conducting business, within the limitations therein; and

WHEREAS, the COVID-19 disease, caused by a virus that spreads easily from person to person which may result in serious illness or death and has been classified by the World Health Organization as a worldwide pandemic, has broadly spread throughout Washington State and remains a significant health risk to all of our people, especially members of our most vulnerable populations; and

WHEREAS, when I last amended the Stay Home – Stay Healthy order (Proclamation 20-25.2) on April 27, 2020, there were 13,521 cases of COVID-19 in Washington State with 749 deaths; and, just five days later, through May 2, 2020, the Department of Health confirmed another 1,664 cases and 85 more deaths, for a total of 15,185 cases with 834 associated deaths, demonstrating the ongoing, present threat of this lethal disease; and

WHEREAS, while there continues to be a significant number of cases of COVID-19 in Washington State with associated deaths, the data and epidemiological models predict that we have passed the peak of the virus' progression in the state; and, the health experts credit this decline to the mandatory social distancing practices and prohibitions we have put in place; and

WHEREAS, the health professionals and epidemiological modeling experts predict that we have passed the peak of the progression in the state, and the data suggests it is appropriate to continue a careful, phased, and science-based approach to slowly re-opening Washington State. In addition, modelers agree that fully relaxing social distancing measures will result in a sharp increase in the number of cases; and

WHEREAS, this unprecedented health crisis has caused extraordinary anxiety and a significant disruption of routine and important activities for every Washingtonian; and I recognize the extraordinary resiliency, strength, adaptability, and courage of every Washingtonian during this difficult time; and

WHEREAS, many people in Washington State attend religious services on a regular basis. Such services are a vital part of the spiritual and mental health of our community, and some of these services can be conducted in a manner similar to comparable secular activities to prevent prolonged exposure to individuals outside of their immediate household while ensuring safe social distancing and hygiene practices. And, to help inform future lifting of additional restrictions in phases, I have directed my staff to engage with a broad range of religious leaders beginning as soon as this week; and

WHEREAS, the science also suggests that some business activities can be conducted with limited exposure to customers while ensuring safe social distancing and hygiene practices. These business activities include landscaping, pet walking, car washing, vehicle and vessel sales, and retail limited to curb-side pickup, all of which are important to revitalizing Washington State's economy, restoring jobs and providing necessary goods and services; and

WHEREAS, counties in Washington State with lower population density generally are experiencing a lower transitory population which decreases the risk of virus spread and, under appropriate conditions, are able to control and absorb virus outbreaks within the capacity of existing local and regional health care systems without significant increased risk of being overwhelmed; and

WHEREAS, the Washington State Department of Health's data demonstrates that some less-populated counties with fewer than 75,000 residents have not identified a new COVID-19 case for the last three consecutive weeks, and this data supports providing those counties with an opportunity to lift additional restrictions, subject to certain conditions and requirements, an opportunity that is not yet safe to offer to other counties; and

WHEREAS, based on the science and data, current COVID-19 pandemic conditions now permit further adjustment of the prohibitions in Proclamations 20-25, 20-25.1 and 20-25.2 to allow for resumption of some religious services and certain business activities, and the opportunity for less densely populated counties that have not identified a resident with COVID-19 in the last three weeks to seek additional exceptions to these prohibitions under certain limited circumstances, while retaining the remainder of the restrictions imposed in Proclamations 20-25, 20-25.1 and 20-25.2 to protect the health and safety of all Washingtonians; and

WHEREAS, the worldwide COVID-19 pandemic and its progression in Washington State continue to threaten the life and health of our people as well as the economy of Washington State, and remain a public disaster affecting life, health, property or the public peace; and

WHEREAS, the Washington State Department of Health continues to maintain a Public Health Incident Management Team in coordination with the State Emergency Operations Center and other supporting state agencies to manage the public health aspects of the incident; and

WHEREAS, the Washington State Military Department Emergency Management Division, through the State Emergency Operations Center, continues coordinating resources across state government to support the Department of Health and local health officials in alleviating the impacts to people, property, and infrastructure, and continues coordinating with the Department of Health in assessing the impacts and long-term effects of the incident on Washington State and its people.

NOW, THEREFORE, I, Jay Inslee, Governor of the state of Washington, as a result of the above-noted situation, and under Chapters 38.08, 38.52 and 43.06 RCW, do hereby proclaim and order that a State of Emergency continues to exist in all counties of Washington State, that Proclamation 20-05 and all amendments thereto remain in effect as otherwise amended, and that, to help preserve and maintain life, health, property or the public peace pursuant to RCW 43.06.220(1)(h), Proclamations 20-25, 20-25.1 and 20-25.2 (Stay Home – Stay Healthy) are amended to extend all of the prohibitions and each expiration date therein to May 31, 2020, except for those prohibitions regarding the specific activities listed below. All other provisions of Proclamations 20-25, 20-25.1, 20-25.2 shall remain in full force and effect.

FURTHERMORE, in collaboration with the Washington State Department of Health, and based on analysis of the data and epidemiological modeling, I have established a phased-in approach to re-opening Washington State, which can be found in the Safe Start Washington re-opening plan here; and, while all counties are currently in Phase I, counties with a population of less than 75,000 that have not identified a resident with COVID-19 the three most recent consecutive weeks, may request an exemption from specific aspects of the remaining prohibitions of this Proclamation by submitting a variance application to the Secretary of the Washington State Department of Health in compliance with the requirements found in the Safe Start Washington re-opening plan.

FURTHERMORE, while I continue to permit remote spiritual and religious services, and while I continue to classify religious counseling as an essential activity that may be conducted in person if it is not possible to provide those counseling services remotely, I now hereby order that religious services may also be provided as a drive-in service, with one household per vehicle, but only so long as participants fully comply with requirements that will be issued as soon as possible, but no later than May 15, 2020, and with the social distancing requirements and coronavirus related hygiene recommended by the Washington State Department of Health.

FURTHERMORE, I continue to permit the low-risk activities previously permitted, including some outdoor recreation as reflected in Emergency Proclamation 20-25.2 and its accompanying guidance materials issued April 27, 2020, as well as the business activities reflected or clarified in formal guidance documents issued on March 25, 2020 (construction), March 27, 2020 (real estate and mortgage), March 31, 2020 (general guidance) and April 29, 2020 (construction).

FURTHERMORE, I hereby order that the data and science supports re-opening additional low-risk activities during Phase I, including the business activities listed below. Re-opening these low-risk activities may occur when participants are able to fully comply with the industry-specific requirements that will be issued as soon as possible but no later than May 15, 2020, which, at a minimum, will require compliance with the social distancing and hygiene requirements indicated by the Washington State Department of Health:

- Landscaping and lawn care
- Vehicle and vessel sales
- Pet walking
- Retail (curb-side pick-up orders only)
- Car washes

FURTHERMORE, in collaboration with the Washington State Department of Health, in furtherance of the physical, mental, and economic well-being of all Washingtonians, I will continue to analyze the data and epidemiological modeling and adjust the Safe Start Washington re-opening plan accordingly.

I again direct that the plans and procedures of the *Washington State Comprehensive Emergency Management Plan* be implemented throughout state government. State agencies and departments are directed to continue utilizing state resources and doing everything reasonably possible to support implementation of the *Washington State Comprehensive Emergency Management Plan* and to assist affected political subdivisions in an effort to respond to and recover from the COVID-19 pandemic.

I continue to order into active state service the organized militia of Washington State to include the National Guard and the State Guard, or such part thereof as may be necessary in the opinion of The Adjutant General to address the circumstances described above, to perform such duties as directed by competent authority of the Washington State Military

Department in addressing the outbreak. Additionally, I continue to direct the Department of Health, the Washington State Military Department Emergency Management Division, and other agencies to identify and provide appropriate personnel for conducting necessary and ongoing incident related assessments.

All persons are again reminded that no credentialing program or requirement applies to any activities or operations under this Proclamation.

Violators of this order may be subject to criminal penalties pursuant to RCW 43.06.220(5). Further, if people fail to comply with the required social distancing while engaging in the phased modifications of the mandatory social distancing requirements, I may be forced to reinstate the prohibitions established in earlier proclamations.

Signed and sealed with the official seal of the state of Washington on this 4th day of May, A.D., Two Thousand and Twenty at Olympia, Washington.

By:

_____/s/_____
Jay Inslee, Governor

BY THE GOVERNOR:

_____/s/_____
Secretary of State

Exhibit D

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IN THE SUPERIOR COURT FOR THE STATE OF WASHINGTON
IN AND FOR KING COUNTY

11 | WASHINGTON LEAGUE FOR
INCREASED TRANSPARENCY &
12 | ETHICS, a Washington non-profit
corporation.
13

14

15 v.

16 FOX CORPORATION, a Delaware
corporation; FOX NEWS NETWORK, LLC,
17 a Delaware corporation d/b/a FOX NEWS
CHANNEL; FOX BUSINESS NETWORK, a
18 for profit company d/b/a/ FOX BUSINESS;
JOHN MOE and JANE MOE, 1-100,
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No. 20-2-07428-4 SEA

**ORDER DENYING MOTION TO
DISMISS**

Plaintiff,

Defendants.

This matter came on Defendants Motion to Dismiss. The court considered the motion,

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any response thereto by the plaintiffs, and any reply by the defendants and the following:

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Order Denying Motion to Dismiss - 1

1. Declaration of Arthur West;

2. Declaration of Lori Shavlik;

3. Declaration of David Koenig; and,

4. Declaration of Jacob Cuzdey.

5. _____; and,

6. _____.

Based on the foregoing it is hereby ORDERED, that the motion to dismiss is DENIED.

Dated this _____ day of May, 2020.

_____
THE HONORABLE BRIAN MCDONALD

Presented by:

LAW OFFICE OF CATHERINE C. CLARK PLLC
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Order Denying Motion to Dismiss - 2