

No. 20-0394

The Supreme Court of Texas

IN RE STATE OF TEXAS,
Relator

ON PETITION FOR WRIT OF MANDAMUS TO THE HARRIS COUNTY CLERK,
THE TRAVIS COUNTY CLERK, THE DALLAS COUNTY ELECTIONS ADMINISTRATOR,
THE CAMERON COUNTY ELECTIONS ADMINISTRATOR, AND
THE EL PASO COUNTY ELECTIONS ADMINISTRATOR

BRIEF OF AMICI CURIAE HEALTHCARE PROFESSIONALS AND INSTITUTIONS

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INTRODUCTION AND INTEREST OF AMICI CURIAE

As the Justices of this Court are aware, we are facing an enigmatic and wholly disruptive force: a novel coronavirus known as COVID-19¹, and the disease, death, and devastation that it continues to bring to all aspects of our society. It is an invisible enemy that has no political affiliation. And Texas is not immune.

The Amici Curiae appearing here are a group of well-respected healthcare professionals—many of whom are serving on the frontlines of this pandemic—and Texas healthcare organizations concerned about the spread of COVID-19. The Amici respectfully urge that decisions about how to safely conduct public elections must be based on science and data, not party lines.

The public health and safety issue underlying this determination is not about whether registered voters may *fear* going to the polls.² Instead, the issue is solely whether voting in person on election day would be likely to injure voters' health. As explained in this brief, the answer is simply, "Yes, it would."

The gravity and import of the present circumstances cannot be overstated. To assist the Court in its deliberations, Amici offer the information and perspective that only they can: that of healthcare professionals treating Texas patients who have

¹ See SuppMR115 ("Technically, COVID-19 refers to the disease itself, and the virus is called SARS-CoV-2 because of its similarity to the original SARS, but [] often COVID-19 is used to refer to the virus as well."). For ease of reference, the Amici use "COVID-19."

² The Healthcare Amici do not address any legal argument about the nature or performance of an elected official's ministerial duties. These Amici focus solely—from a medical perspective—on why the lack of an immunity to COVID-19 is a "disability" for this purpose.

contracted COVID-19 and who understand the science underlying its transmission in mass gathering situations, like polling places. The Amici have special training to understand what preventative measures should be taken to protect the safety of voters. Their perspectives, based on science and their real-world medical experiences, are critical to properly apply the plain language of Texas Election Code section 82.002 under these circumstances.

Amici include the following Texas Healthcare Professionals and Institutions:

Specialists Studying the Effects of COVID-19

- Paolo Angelini, MD (cardiologist and professor of medicine)
- Catherine Troisi, PhD (infectious disease epidemiologist with a specialization in viruses)

Frontline Physicians and Nurses Treating COVID-19 patients

- Joseph Varon, MD (pulmonary specialist)
- Ogadinma Obie, MD (emergency medicine physician)
- Samara Bowen, MD, (emergency medicine physician)
- Ebony Rucker, MD (emergency medicine physician)
- George D. Santos, MD
- Bernard Gerber, MD
- Daryl Knox, MD
- Sylvia Muzquiz-Drummond, MD
- Maria McGee, RN
- Jennifer Kuiper, RN

Healthcare Organizations (See Appx.1)

- Texas Physicians for Social Responsibility
- Doctors for Change and its Board members and leaders in that capacity and individually:
 - Ann Al-Bahis, JD
 - Donna Alexander, MBA
 - Lee Bar-Eli, MD
 - Elizabeth W. Newlin, MD
 - Nancy George, OD;

- Jill Ann Jarrell, MD, FAAP, FAP
- David Kahne, JD
- Chad Lemaire, MD
- Lexi Nolen MPH, PhD
- Hani Serag MD, MPH
- Brian C. Reed MD
- Nicole Lievsay, MPH
- Charu Sawhney, DO, MPH
- Amelia Averyt, MD

Additional Physicians Concerned for their Patients

- Sarah Buttrey, MD
- Greg Sheff, MD
- Mary Ann Gonzales, MD
- Swati Avashia MD
- Kumar Pandian, MD
- Don Williams, MD
- Naomi Hanser, MD
- Elliot J. Trester, MD
- Margaret Kini, MD
- Lisa Doggett, MD

In compliance with Texas Rule of Appellate Procedure 11, Amici advise that no fee has been or will be paid for the preparation of this brief.

ARGUMENT

I.

HEALTHCARE AMICI CONSIDER THE LACK OF IMMUNITY TO COVID-19 A “PHYSICAL CONDITION.”

Section 82.002(a) of the Texas Election Code allows a “qualified” (*i.e.*, properly registered) voter to cast his/her ballot by mail “if the voter has a sickness or physical condition that prevents the voter from appearing at the polling place on election day without a likelihood of needing personal assistance or of injuring the voter’s health.” TEX. ELEC. CODE § 82.002(a).

The Healthcare Amici contend—as medical experts—that the lack of immunity to COVID-19 is a “physical condition” within the meaning of Section 82.002(a).

A. Section 82.002(a)’s Reference to a “Physical Condition” Includes Both Mobility Impairments and Susceptibility to Illness.

Section 82.002(a) broadly defines “disability,” for mail-in voting purposes, to include “*any ... physical condition* that prevents the voter from appearing at the polling place on election day without a likelihood of needing personal assistance *or of injuring the voter’s health.*” TEX. ELEC. CODE § 82.002(a).

Certainly, the Legislature recognized that voters with mobility-related disabilities (*i.e.*, voters who might need “personal assistance”) are eligible to vote by mail. Section 63.0015 expressly refers to “individuals with a mobility problem that substantially impairs the person’s ability to move around,” and provides specific

examples of such mobility-related disabilities. TEX. ELEC. CODE § 63.0015(a)-(d). In addition to the option to vote by mail, such voters can also vote in person with special accommodations, as provided by the statute. *Id.*

The Legislature chose in Section 82.002(a) to make the category of voters eligible to vote by mail *broader* than those with mobility-related conditions. Section 63.0015 demonstrates that, if the Legislature had intended to restrict section 82.002(a)'s application to such a group, it knew how to do so. *See Lippincott v. Whisenhunt*, 462 S.W.3d 507, 509 (Tex. 2015) (“Had the Legislature intended to limit the Act to publicly communicated speech, it could have easily added language to that effect.”); *In re Lee*, 411 S.W.3d 445, 454 (Tex. 2013) (“If the Legislature had intended to authorize courts to inquire into the child's best interest when determining whether to render judgment on validly executed MSAs, as it did in section 153.0071(b) with respect to judgments on arbitration awards, it certainly knew how to do so.”).

Instead, in Section 82.002, the Legislature recognized that some voters cannot protect their health through a special accommodation at the polling place. Some voters need to vote by mail to prevent the likelihood of an injury to their health. These voters, under the plain language of section 82.002(a), include those who are susceptible to illness—as explained below by the Healthcare Amici.

For the same reason that voters over age 65 are permitted to early vote by mail under Section 82.003 (because they are more susceptible to illness, even in the absence of a mobility-impairment), so too should individuals without immunity to COVID-19 be permitted to do so under Section 82.002(a). For such voters, no accommodation can be made at the polling place to effectively protect against injuring those voters' health given the virulence of COVID-19.

B. Susceptibility to Illness is a Form of Physical Disability.

Each person has a physical immune system that should function in a certain manner. Appx.2, ¶ 9. However, the human population has not yet developed an immunity to the *novel* coronavirus, meaning the human body is incapable of mounting a proper response to defend itself from injury caused by the virus. *Id.*, ¶¶ 4, 9; Appx.4, p.2; SuppMR116.³ A person lacking immunity to COVID-19 is “literally disabled since you cannot protect naturally through a properly functioning immune system.” Appx.2, ¶ 9.

The Healthcare Amici urge that the lack of immunity to COVID-19 is a *physical condition* that constitutes a “disability” under section 82.002(a). Appx.2, ¶ 9; Appx.4, p.2; Appx.6, ¶ 4; SuppMR151.

³ A small portion of the population has “recovered” from COVID-19. Yet, even in those cases, the scientific community has not confirmed that an individual who was previously infected with the virus actually gains immunity without risk of reinfection. Appx.2, ¶ 12; SuppMR116.

C. This novel virus is different from the seasonal flu.

The Healthcare Amici are aware of claims by some that this situation is “no different than the flu,” and that the ability to vote by mail should be denied on that basis. As a matter of medical science, there are significant differences between the novel COVID-19 virus and any seasonal flu, which warrant different safety precautions, as follows:

Differences Between COVID-19 and Influenza (Flu) Viruses from a Healthcare Professional’s Perspective:	
Flu	COVID-19
Vaccine	
Very effective FDA-approved vaccines are widely available on a seasonable basis. SuppMR134; Appx.2, ¶ 11.	No vaccine for COVID-19 currently exists; experts view it as unlikely there will be a vaccine for a year or much longer. SuppMR117; Appx.2, ¶ 12.
Diagnosis	
Diagnosis is easy and reliable. The test is widely-available, easy to administer, and results are practically instant. Appx.2, ¶ 11.	Diagnosis is very difficult. Reliable tests are not widely-available; and results can take long to obtain or require repetition to ensure accuracy. SuppMR141, 150.
Warning Signs	
Illness is apparent from the outset. One with the flu would be aware to avoid contact with others as a means of preventing the spread.	Illness can be invisible. One with COVID-19 can be an asymptomatic carrier for an extended period, without any way to determine whether public

	presence may cause risk of infections to others. SuppMR114, 150.
Symptoms	
Symptoms are predictable, are typically not severe, and when they progress, do so on a well-established and contained course. Appx.2, ¶ 13.	Symptoms vary widely, from none, to severe physical harm, to death. The symptoms can progress savagely and unpredictably. SuppMR114; Appx.2, ¶¶ 13-14; Appx.6, ¶ 3.
Treatment	
FDA-approved treatment is widely available and effective. Appx.2, ¶ 11.	No proven treatment exists, and the treatments being administered have inconsistent results. Appx.2, ¶ 12.
Immunity	
Natural immunity has developed in many humans over time. Appx.2, ¶ 11.	No immunity has been confirmed, even for those who have recovered from COVID-19. Herd immunity will not develop in the coming months, leaving a wide pool of people (including the vast majority of the Texas voting population) susceptible to infection. SuppMR116, 118, 124; Appx.2, ¶ 12.
Mortality	
The case fatality rate for the flu is about one-tenth of what it is with COVID-19. SuppMR140.	

II.
**BECAUSE OF A REGISTERED VOTER’S LACK OF
IMMUNITY TO COVID-19, IN-PERSON VOTING PRESENTS
A LIKELIHOOD OF INJURING THE VOTER’S HEALTH.**

Based on the COVID-19 patients whom Amici have treated, the Amici firmly believe that, due to the general lack of immunity in the population, in-person voting presents a likelihood of injuring a voter’s health, even if the voter is under the age of 65. The Amici have treated patients of all ages and COVID-19 conditions.

A. “Prevent” Means to “Hinder or Impede.”

As this Court has explained, “[w]hen a statute uses a word that it does not define, our task is to determine and apply the word’s common, ordinary meaning.” *Jaster v. Comet II Const., Inc.*, 438 S.W.3d 556, 563 (Tex. 2014). The Court begins by reviewing dictionary definitions of the undefined word. *Id.* (citing *Epps v. Fowler*, 351 S.W.3d 862, 873 (Tex.2011) (Hecht, J., dissenting) (“The place to look for the ordinary meaning of words is ... a dictionary.”)).

Section 82.002(a) provides that a “qualified voter is eligible for early voting by mail if the voter has a sickness or physical condition that ***prevents*** the voter from appearing at the polling place on election day without a likelihood of needing personal assistance or of injuring the voter’s health.” TEX. ELEC. CODE § 82.002(a) (emphasis added).

Black’s Law Dictionary defines “prevent” as: “To stop from happening; to hinder or impede <a gag order to prevent further leaks to the press>.” BLACK’S LAW

DICTIONARY (11th ed. 2019). Texas courts have applied this dictionary definition of the word “prevents” in interpreting other Texas statutes. *E.g.*, *Williams v. State*, 582 S.W.3d 692, 701-03 (Tex. App.—Houston [1st Dist.] 2019, pet. ref’d) (holding that use of “prevents” in Texas Penal Code section 42.062(a) means “hinders, impedes, or obstructs”).

Consistent with the common, ordinary meaning of the word “prevents,” Section 82.002(a) means that “qualified voter is eligible for early voting by mail if the voter has a sickness or physical condition that *prevents or impedes* the voter from appearing at the polling place on election day without a likelihood of needing personal assistance or of injuring the voter’s health.” *See Jaster*, 438 S.W.3d at 563 (“[W]e must give them their common, ordinary meaning unless the statute clearly indicates a different result.”).

B. The Lack of Immunity Hinders or Impedes a Registered Voter’s Ability to Safely Vote in Person.

The Healthcare Amici contend that any registered voter lacking an immunity to COVID-19 will not be able to vote in-person at a public polling place in July or November 2020 without “a dangerous and unacceptable risk” of contracting COVID-19, which would be injurious to the voter’s health. SuppMR152; *see* Appx.2, ¶ 15; Appx.4, p.2-3; Appx.6, ¶¶ 5, 7. Their contention is based on medical expertise in understanding how COVID-19 is transmitted, the severity of its symptoms if contracted, and the lack of reliable measures to prevent the spread of

COVID-19 in mass gathering situations, as discussed below. *See* Appx.2, ¶¶ 1, 15, 16; *see generally*, Appx.4.

1. Engaging in “mass congregation” creates a likelihood of contracting COVID-19.

State and federal officials nationwide, based upon the advice of medical experts, have recognized that mass gatherings cause an increased risk of spreading COVID-19. *E.g.*, 3MR0538. Governmental officials have put orders in place to restrict the sizes and conditions of public gatherings precisely to reduce the likelihood of “community spread.” *E.g.*, 3MR0538; 3MR0537.

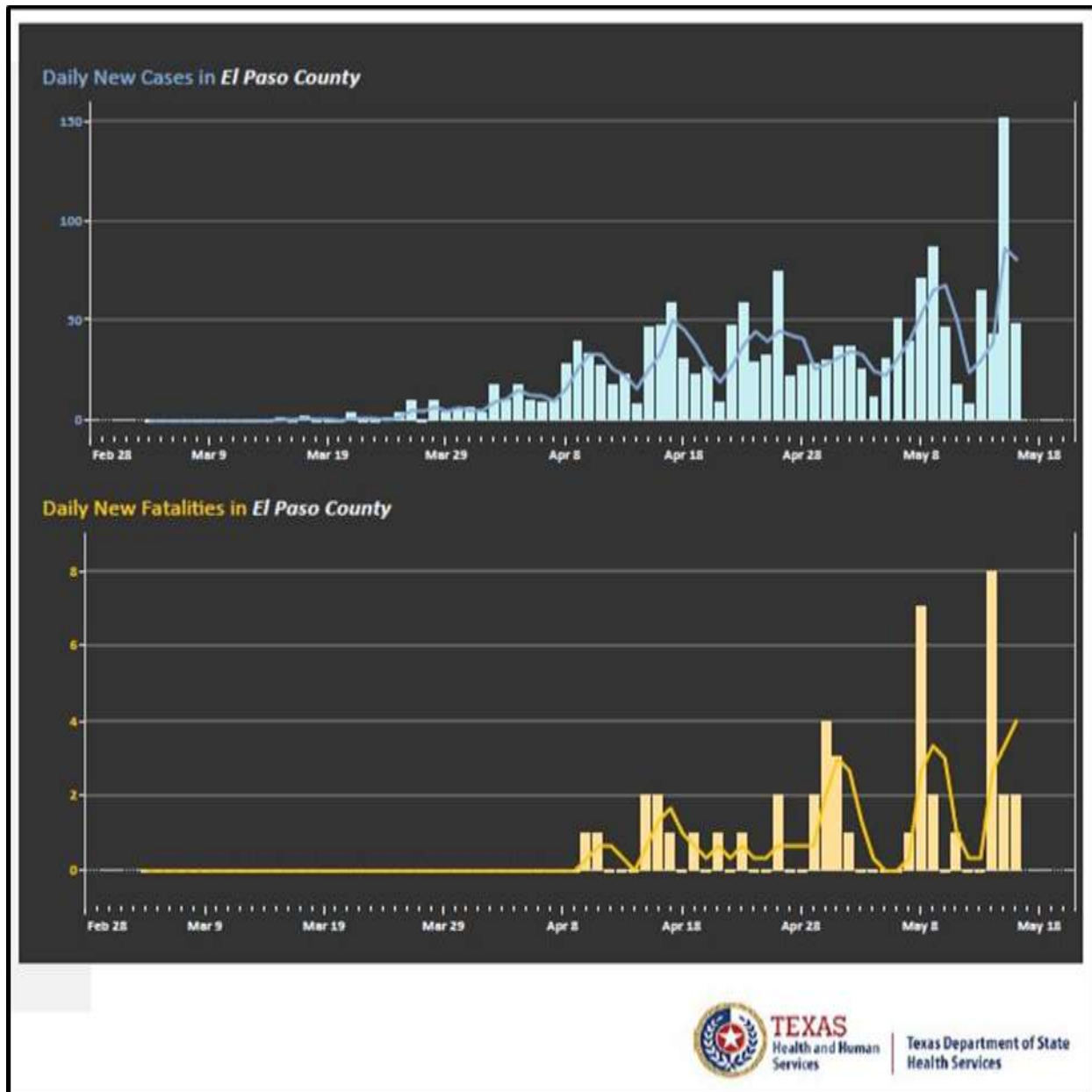
Although the rate of transmission likely to result from a mass congregation cannot be quantified precisely, the Healthcare Amici believe that voting in-person at public polling places, in the absence of an immunity to COVID-19, is certain to result in increased infection rates of the disease. *See* 3MR0539; SuppMR120, 162 (“Until we have the vaccine, ... because we have so many susceptible people, ... the chances of successfully containing this virus are very small.”); Appx.4, p.2 (Based on the lack of COVID-19 immunity, “[t]here is a likelihood of injuring [a voter’s] own health at an open polling place where people congregate, even with all, good faith attempts to control massing.”); Appx.5, ¶ 4 (“[G]atherings at voting sites, especially in larger concentration of people, and especially considering the anticipated long lines at check in and extended voting durations on a lengthy ballot” will place voters “at increased risk for acquiring COVID19.”).

COVID-19 transmits in two main ways: (1) droplets in the air resulting from talking, coughing, sneezing, etc.; and (2) communal touching of environmental surfaces, i.e., “fomites.” SuppMR115. Both methods of transmission would be active at an in-person polling place. SuppMR122. There, voters must stand in line, pass through entrances and exits, and interact with others in close proximity. *Id.* Communal touching of pens, materials, and voting machines would also occur in high frequency. *Id.* Based on these transmission methods, the scientific evidence underlying COVID-19 demonstrates that public polling places “represent a heightened danger for transmission of COVID-19 disease ... through droplet, airborne, or environmental surfaces.” 4MR0658-59.

The risk of transmission at polling places is increased by the fact voters can be fully asymptomatic carriers of COVID-19. SuppMR150. “One in four people who are infected don’t have any symptoms, and yet can still transmit the disease.” SuppMR114. Consequently, voting in person cannot be made safe merely by “isolating only symptomatic persons.” 4MR0659.

The personal medical experiences of the frontline worker Healthcare Amici, as supported by data from the Texas Department of State Health Services (DSHS), demonstrate that even congregating in smaller numbers than would be required for in-person voting has resulted in notable spikes of transmission. For example, in El Paso County, approximately two weeks after the Easter Holiday (which is widely

celebrated by members of that community), the frontline healthcare workers faced the highest numbers of COVID-19 that they had yet experienced in this pandemic. See Appx.2, ¶ 16. Their personal reports are supported by the data:



Available at
<https://tabexternal.dshs.texas.gov/t/THD/views/COVIDExternalQC/COVIDTrends?:isGuestRedirectFromVizportal=y&:embed=y> (last visited May 18, 2020).

2. The “injury to one’s health” caused by COVID-19 is often extreme.

Not only is the likelihood of contracting COVID-19 high, the consequences are quite dramatic and simply cannot be underestimated. The virus “causes more significant disease” than any other virus of its type that epidemiologists have ever studied. SuppMR114. The resulting illness may generate a wide spectrum of conditions, ranging from mild symptoms including fever, dry cough, and shortness of breath, all the way to death. *Id.* COVID-19 “can affect the neurological, cardiological, and pulmonary systems of the body, attacking a patient’s organs and potentially causing a number of serious problems for person with the disease, including renal failure or a stroke. COVID-19 is, to put it bluntly, a whole other ballgame.” Appx.6, ¶ 3.

The virus does not discriminate among age groups. There have been several “young victims with life-threatening conditions such as clots in their lungs, acute strokes and heart attacks. This disease is a killer.” Appx.4, p.1; *see also* Appx.2, ¶ 6 (describing a 15-year old patient in “otherwise excellent health” requiring intubation”). Although the elderly are more susceptible, more and more young people are in ICU or dying from COVID-19. Appx. 5, ¶ 7 (explaining symptoms in this population); *see ‘More and more’ young people are in ICU or dying from coronavirus, World Health Organisation warns*, <https://www.abc.net.au/news/2020-04-04/more-youngerpeople-dying-and-in-icu->

[from-coronavirus-covid-19/12121772](#) (last viewed May 18, 2020); *see also* SuppMR116 (Dr. Troisi testifying that two out of five people hospitalized with COVID-19 are between the ages of 20 and 44). And those who survive may still suffer devastating health consequences, including heart disease and neurologic damage. SuppMR114.

Indeed, the “Accessible Dashboard Data” prepared by the Texas Department of State Health Services and posted on its website reported on May 18, 2020 that **56.9% of confirmed cases in Texas involved individuals 49 years or younger** and only 17% involve individuals 65 and older:

Age of Confirmed Cases as of 5/18 at 9:30 AM CST		
Age Groupings	Number	%
<1 year	36	0.3%
1-9 years	167	1.2%
10-19 years	429	3.0%
20-29 years	2,215	15.5%
30-39 years	2,591	18.2%
40-49 years	2,663	18.7%
50-59 years	2,616	18.3%
60-64 years	1,101	7.7%
65-69 years	792	5.6%
70-74 years	531	3.7%
75-79 years	353	2.5%
80+ years	640	4.5%
Unknown	124	0.9%
Total	14,258	100.0%
Demographic data comes from completed case investigations by local and regional health departments received by DSHS.		
Completed case investigations received by DSHS = 14,258		

See <https://dshs.texas.gov/coronavirus/additionaldata/> (Excel spreadsheet available at [Accessible Dashboard Data](#) hyperlink found on that page (last visited 5/18/20)). And in Travis County, the numbers are more startling: As of May 18, 2020, sixty-four percent of reported cases involve individuals 49 and younger. See <https://austin.maps.arcgis.com/apps/opsdashboard/index.html#/39e4f8d4acb0433baae6d15a931fa984> (last visited 5/18/20).

3. Sanitation measures cannot be effectively implemented for in-person voting.

The State has argued that sanitation measures can be used to sufficiently reduce or eliminate the risk of spreading COVID-19 at polling places. Petition at 5-6. Based on their medical expertise, the Healthcare Amici respectfully disagree. These Amici are familiar with the rigorous sanitation protocols used in their facilities by highly-trained professionals. Yet, even there, contraction of the virus occurs. The Amici do not believe it is realistic to employ sanitation methods uniformly and thoroughly enough in a public polling place, especially given how lightly trained and overwhelmed poll workers will be, to make it unlikely that COVID-19 would spread among voters. *See* Appx.2, ¶ 17.a-d; Appx.5, ¶¶ 5-6; Appx.6, ¶¶ 5-7; 4MR0658; SuppMR122-23.

The Amici's scientific understanding of how COVID-19 is transmitted through respiratory droplets—which are the most common culprit of transmission—is a key reason for this belief. These droplets can hang in the air for several minutes. Appx.2, ¶ 17.c. It is ineffective to sanitize a surface while droplets remain in the air because they can still settle on that exact surface, after it was wiped down. *Id.* For this reason, medical facilities treating COVID-19 patients close off a room for about an hour after a patient has departed, and only thereafter allow the professionally-trained sanitation crew in the room to disinfect, after all droplets have settled. *Id.* Such delay between voters in a polling place would not be feasible. *Id.*

Moreover, the Healthcare Amici express concern about whether the necessary amount of sanitation supplies would be available to routinely disinfect all polling areas throughout all voting periods; and about whether it would be possible to hire an adequate number of poll workers and sufficiently train them about how to perform these important sanitation activities. *Id.*, ¶ 17.a-b. The potential for mistakes to occur—which cause transmission of COVID-19—“increases exponentially with non-medical staff” attempting to implement the type of sanitation measures necessary for safety. *Id.*, ¶ 17.d.

4. Reliance on personal protective equipment (PPE) is not a feasible solution.

To make in-person voting truly safe, election officials would need to use personal protection equipment similar to that used by hospital personnel. 4MR0656. The type of PPE necessary to prevent transmission of COVID-19 includes a very tightly fitted mask, a sneeze-guard/clear shield in front of the face, a gown that ties in the back, and gloves. SuppMR149. Masks come in different sizes and must be properly fitted to an individual to ensure a tight seal around the face; and they must be worn correctly, which many non-healthcare professionals fail to do. Appx.2, ¶ 17.a, d.

The most glaring problem of the State’s PPE “solution” is that the country faces an extreme shortage of supply. The necessary PPE is not readily-available for all healthcare workers—much less for every voter in a general election. *See* Appx.2,

¶ 17.a; Appx.5, ¶ 5; SuppMR149; 4MR0661; Zoë Schlanger, *Begging for Thermometers, Body Bags, and Gowns: U.S. Health Care Workers Are Dangerously Ill-Equipped to Fight COVID-19*, TIME (Apr. 20, 2020), available at <https://time.com/5823983/coronavirus-ppe-shortage/>.

Even if available, PPE is intended for intermittent use; it is not designed to be worn for extended periods of time by voters standing in line to vote or by poll workers for hours throughout the day. SuppMR158-59. By the end of five to ten minutes, the wearer of PPE as described above will often begin to sweat profusely and encounter the fogging of eyeglasses. *Id.* Older voters and officials may find it difficult or even physically impossible to wear the PPE for hours on end. *Id.* It is also widely known that not every person in a public place wears a mask (much less wears one properly). Should a voter refuse to wear a mask, an election judge will then be faced with an impossible choice: expose herself, fellow poll workers, and other voters to a higher risk of transmission or deny the defiant voter's right to vote. *See* TEX. ELEC. CODE § 32.075(c) (presiding election judges have the power of a district judge to enforce orders and preserve the peace including the power to issue an arrest warrant).

5. Social distancing practices are not sufficiently reliable with large numbers of people.

Finally, the social distancing practices recommended by public health authorities are simply not sufficiently reliable with large numbers of people—such

as when voters stand in long lines to vote. As has become clear several months into this pandemic, it is difficult for businesses and government officials to consistently enforce social distancing measures in public places. Appx.5, ¶ 5; SuppMR127.

Some who argue that in-person voting should be required for everyone under 65 support their position by noting that Texans are choosing to shop at grocery stores and other retailers. This argument misses the important fact that it is a *choice*. If a shopper recognizes that her lack of immunity to COVID-19 puts her at a health risk by shopping in a store, then she can *choose* to protect her health by ordering items for delivery at home. In contrast to the ability to shop, a Texan's right to vote is a fundamental, constitutionally-protected right. The Healthcare Amici see no justification for requiring a registered voter in Texas to risk severe injury to his health in order to exercise his constitutional right to vote during a global pandemic.

III. VOTING BY MAIL PROVIDES A SAFE ALTERNATIVE.

For any registered voter lacking an immunity to COVID-19, the Healthcare Amici contend that voting by mail provides a medically-safe alternative, as recommended by experts at the Centers for Disease Control. *See* Appx.2, ¶ 9; Appx.3, ¶ 16 (4MR0661); Appx.4, p.2-3; Appx.5, ¶ 8; Appx.6, ¶ 7; SuppMR125; SuppMR151. When the risk for injury to registered voters is so severe—potentially deadly—there is little to no benefit for in-person voting when a viable mail-in alternative is already available by statute.

Amici’s concerns are broader than just the risk of infection to themselves or to registered voters generally. If healthcare workers who treat COVID-19 patients, like many of the Amici, are themselves forced to vote in person, it presents an enhanced risk of spread—both to other voters and workers and at the polls, and the potential of contracting the disease and then infecting patients and other healthcare workers in their facilities. *See* Appx.2, ¶ 18; SuppMR115, 122. The Healthcare Amici have serious concerns about how their community will be impacted if they are not allowed to exercise the statutory right to vote by mail in July and November 2020.

CONCLUSION

The critical issue presented to this Court is not—and should not be—a political issue. It is an issue of public health and safety, which has a direct and substantial impact on our frontline healthcare workers and our healthcare system. Registered voters with no immunity to COVID-19, even if they are otherwise asymptomatic, have a “physical condition that prevents the voter from appearing at the polling place on election day without a likelihood of ... injuring the voter’s health” based on the medically documented and well-known risks of contracting the disease when people gather in large groups.

The Healthcare Amici urge the Court to deny the Petition for Writ of Mandamus.

Respectfully submitted,

By: /s/ Amanda G. Taylor

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CERTIFICATE OF AMICI

Preparation of this brief has been done on a pro bono basis. TEX. R. APP. P. 11(c). No persons other than Amici Curiae or its counsel made any monetary contribution to the preparation or submission of this Brief.

/s/ Amanda G. Taylor

Amanda G. Taylor

CERTIFICATE OF COMPLIANCE

Amici curiae certify that the portions of this brief included within the scope of Texas Rule of Appellate Procedure 9.4(i)(1) contain 4,207 words.

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I hereby certify that, on May 19, 2020, a true and correct copy of the above and foregoing has been served via electronic service on the following:

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No. 20-0394

The Supreme Court of Texas

IN RE STATE OF TEXAS,

Relator

ON PETITION FOR WRIT OF MANDAMUS TO THE HARRIS COUNTY CLERK,
THE TRAVIS COUNTY CLERK, THE DALLAS COUNTY ELECTIONS ADMINISTRATOR,
THE CAMERON COUNTY ELECTIONS ADMINISTRATOR, AND
THE EL PASO COUNTY ELECTIONS ADMINISTRATOR

APPENDIX

- Appx.1: Information re: Institutional Amici Parties**
- Appx.2: Declaration of Amici Dr. Ogadinma Obie**
- Appx.3: Declaration and CV of Amici Dr. Catherine Troisi**
- Appx.4: Declaration of Amici Dr. Joseph Varon**
- Appx. 5: Declaration of Amici Dr. Paolo Angelini**
- Appx. 6: Declaration of Amici Dr. Ebony Rucker**

APPENDIX 1

[Call to Action](#)[Who We Are](#)[What We Do](#)[News](#)[Get Involved](#)

ABOUT TEXAS PSR

Physicians, nurses, and concerned citizens committed to a safe environment and healthier Texas

Texas Physicians for Social Responsibility is the Texas chapter of Physicians for Social Responsibility (PSR). Guided by medical and public health expertise, Texas PSR works in partnership with national PSR and other PSR chapters to protect human life from the gravest threats to health and survival through outreach, education, and advocacy.

Texas PSR's membership is geographically and professionally diverse with members in all major cities representing physicians, nurses, and other healthcare professionals, along with other concerned citizens.

Our strategy for achieving positive change is to provide a conduit for the medical community to educate and inform the public and lawmakers about potential threats to public health through education, analysis, and expert testimony on key issues such as climate change, food systems, toxics, and nuclear weapons.

For general questions, including media inquiries, please contact:

Steve McKee, MSSW, Executive Director
steve.mckee@texaspsr.org

We are a proud member of Alliance for a Clean Texas and the Texas Public Health Coalition.

Texas PSR is a 501(c)(3) nonprofit organization and your donations are tax deductible.

Doctors for Change

About Us

Doctors For Change believes that healthcare providers have a unique ability and responsibility to advocate with their patients for improvements to the healthcare system. While many organizations work to address issues like food insecurity and access to care, few have tackled these issues by bringing the medical provider into the public health and policy arena. DFC serves as an educational resource and forum in which healthcare providers, students, and community members can advocate locally and statewide.

Our programs and advocacy efforts fall under the umbrella of one of four focus areas: access to care, mental health, anti-human trafficking, and access to a healthy lifestyle. For instance, in partnership with the Houston Public Library, our 'Doc Days' program brings physicians and students into a local library on a Saturday to provide information on healthy living, health coverage options, and cooking demonstrations. The mental health committee offers trainings to primary and secondary school teachers on how to identify students with mental health needs, such as attention deficit disorder and depression. Additionally, the anti-human trafficking committee has created and offers trainings to healthcare providers and medical students on the prevalence of human trafficking, signs that their patient may be a victim, as well as how to safely intervene when a victim has been identified.

Throughout the year we also plan and host educational forums that highlight subtopics within our 4 focus areas. We've had forums on veterans' mental health, challenges and solutions to accessing a healthy lifestyle, the unique challenges and opportunities around adolescent healthcare, and the impact of the built environment on health. Each forum concludes with guests completing an 'Advocacy Action' form, indicating whether they would like to share the information through social media, contact their representative on a particular issue, write an op-ed on the topic, or volunteer with DFC. During the legislative session, we also coordinate advocacy days to give providers and medical students hands-on experience with advocacy, and to educate legislators on the impact of health-related legislation and policies.

APPENDIX 2

No. 20-0394

The Supreme Court of Texas

IN RE STATE OF TEXAS,

Relator

On Petition for Writ of Mandamus to the Harris County Clerk, the Travis County Clerk, the Dallas County Elections Administrator, the Cameron County Elections Administrator, and the El Paso County Elections Administrator

DECLARATION OF OGADINMA OBIE, MD

1. My name is Dr. Ogadinma Obie and I am a medical doctor who is board-certified in emergency medicine. I am a physician practicing in emergency rooms throughout Texas, California, and Louisiana. I reside in Houston, Texas, but am currently working in El Paso, Texas at the University Medical Center of El Paso treating Texas COVID-19 patients. I have been practicing medicine for 11 years.

2. I have been treating COVID-19 patients since February 2020, initially treating COVID-19 patients in the Houston area, and now in the El Paso area.

3. COVID-19 is the official name announced by the World Health Organization for the disease that develops when a person contracts the SARS CoV-2 virus, a new coronavirus (“SARS CoV-2”) that had not previously been identified in the human population.

4. All humans, regardless of age, are susceptible to contracting and spreading the SARS CoV-2; all humans, regardless of age can possibly develop the disease COVID-19; and all humans, regardless of age that develop COVID-19 can potentially experience serious life-threatening issues and potentially die from the disease.

5. For those that contract the disease, the deterioration from mild symptoms to severe life-threatening issues can be extremely sudden, even in individuals under the age of 65 and otherwise in good health.

6. In fact, a 15-year old patient in my team's care arrived at the hospital with a mildly rapid heart rate and, within 48 hours, he experienced a rapid decline and needed to be intubated. A rapid decline for someone so young and in otherwise excellent health is extremely unusual and unheard of for other viruses that cause respiratory illness such as influenza A or influenza B, commonly known as the "flu."

7. We, medical professionals, in Texas and all over the world are still learning more on a daily basis about the SARS CoV-2 and COVID-19, including its effect on the human body and how it is transmitted.

8. The medical community does have some important information about the SARS CoV-2 and its transmission. The SARS CoV-2 is very aggressive and highly opportunistic and seeks to infect whomever it can. I am aware of one patient at the hospital where I work that contracted the virus from his wife who contracted it from his son who went to Mexico, just across the border from El Paso, to see another family member. The patient never went to Mexico to see the family member, nor did he see the son, but his wife saw the son and returned home where the patient resided. Thus, this highly contagious virus traveled through two carriers before making the third person very ill.

9. Because the SARS CoV-2 is new, humans do not have an existing immunity to the virus, and thus they are susceptible to contracting the virus. If someone has not developed an immunity, then they have a physical condition that presents a likelihood of injuring his or her health when they are exposed to others carrying the SARS CoV-2. Each person has an immune system that should function in a certain manner, and the lack of a proper immune response is a physical condition. A lack of developed immunity or inability to mount an immune response to the SARS CoV-2 is essentially a disability: you are literally disabled since you cannot protect naturally through a properly functioning immune system.

10. The SARS CoV-2 is very different than the flu. Yes, both are viruses, and both cause respiratory illness.

11. Importantly, however, many people are able to mount a proper natural protective immune response to the flu, which is common and seasonal. Additionally, because of the access to flu vaccines, people can obtain an immunity to the flu virus. Lastly, there are existing treatment protocols in place, including use of antiviral medications, such as Tamiflu, that allow for a reduction in symptoms, including a reduction in severe symptoms, for the flu.

12. None of these are present for the SARS CoV-2: as far as we know, most people do not have an immunity; there is no vaccine, and there are no FDA-approved or universally accepted antivirals that can be used to lessen the effects of the SARS CoV-2. Even for those that have been infected by the virus, it is not clear even of those who have contracted COVID-19 if they have an immunity to acquiring the disease again.

13. While both the flu and SARS CoV-2 can cause respiratory illness, even severe flu cases that cause acute respiratory issues have those issues develop gradually. Those suffering from COVID-19 are susceptible to acute respiratory problems at a much more rapid rate. SARS CoV-2

can have a savage effect on the human body's organs, including the lungs, and triggers cascade of deterioration oftentimes with no yield or barriers to that downward progression. A COVID-19 patient can go from being able to breath, to rapidly having severe breathing problems that require intubation.

14. SARS CoV-2 does not only affect the lungs, but also can damage the liver, cause coagulation (blood clots), and impair a person's mental state. I am aware of a patient with COVID-19 at our hospital that, because of the coagulation issues, simultaneously experienced both blood clots and severe bleeding out. This is a phenomenon that occurs in severe COVID syndrome as the body tries to adapt to the coagulation problems by thinning its own blood.

15. Because of the high communicability of COVID-19 and its severe effects on the human body, my recommendation to my patients and to anyone in my care would be to avoid mass gatherings and to do all that you can to minimize your risk to exposure to the SARS CoV-2. This recommendation would be identical to the risk assessment and risk versus benefit analysis I would perform for other potential exposure to viruses. In-person voting during early voting and on election day is a mass gathering, and thus I would recommend my patients or others in my care should take steps to avoid joining a mass gathering, including pursuing options for in-person voting. My recommendation would be the same regardless of the person's age.

16. This recommendation is based on my medical experience and what I have witnessed first-hand treating COVID-19 patients. In El Paso, our hospital recently experienced a significant rise in cases two weeks after Easter Sunday (April 12, 2020), when many in our community ignored recommendations and social distancing practices to spend time with family members during this significant Christian religious holiday. I believe this spike in cases was the result of individuals participating in group gatherings.

17. I am aware of some of the practices that the State of Texas plans to put into place to attempt to avoid transmission of the SARS CoV-2 at polling places. Unfortunately, these planned practices would not change my recommendation as the planned practices are problematic for several reasons.

- a. First, historically there has been a significant shortage of cleaning products and personal protective equipment, such as masks, that would make it extremely difficult for all polling locations in the state to protect registered voters and poll workers from virus transmission. In our hospital, the recommended best practices for medical staff is that we change masks between patients. But the planned practices for the polling places do not have the poll workers changing masks between registered voters. Frankly, even if they did, there would not be enough mask supply to support poll workers changing their masks with the recommended frequency.
- b. Second, even with increased cleaning of surfaces, there is still a likelihood for transmission of the disease. Our hospital, like other hospitals, have extensively medically trained cleaning services to work to eliminate the viruses in our hospital rooms. That level of trained staff may not be available to clean polling places across Texas, and I would imagine that it would be unreasonable to expect poll workers to perform such a high level of trained cleaning and sanitizing with consistency.
- c. Third, the planned practices do not tackle the primarily problem: the polling locations will be a mass gathering of persons breathing and speaking in a contained space. The virus is most readily contracted through respiratory droplets from an infected person into the air and onto surfaces, where another person breathes in

those particles or touches a surface and then touches their face, nose, or mouth. Simply having that many people in a contained space is highly problematic even taking precautions. SARS CoV-2 particles can remain in the air for several minutes. When hospital rooms are cleaned by our professional cleaning staff, they wait to begin cleaning until after the air has been allowed to settle in the empty room, generally about an hour. This is so that they do not clean surfaces in the room only to have infectious particles in the air settle on surfaces after they are done. In polling places, to the best of my knowledge there are no adequate planned practices for addressing what will inevitably be virus particles in the air, even under the State's planned cleaning measures.

- d. Fourth, even with all precautions, such as masks, there are mistakes and accidental missteps that inevitably will occur that can result in the infection of others. Our hospital, like others around the country, have strict protocols in place, but it only takes one inadvertent error — like a nurse or doctor removing their glove in the wrong way — for an infection of SARS CoV-2 to occur. This potential for mistakes increases exponentially with non-medical staff, poll workers and registered voters trying to take similar precautions. I see examples of this at the hospital on a regular basis when members of the public enter the hospital with their masks on incorrectly (i.e. below their nose) or with gloves on their hands, but where they touch surfaces and their face with the same gloves.

18. Moreover, hospital workers like myself, concerned about our regular exposure to SARS CoV-2, would like to protect those around us from exposure to the virus. On a regular basis, at our homes and with our own families, we are working to avoid exposing our families to SARS

CoV-2. Similarly, we take steps to avoid exposing others in society to SARS CoV-2, taking steps such as grocery delivery or sending others in our families to run errands in public spaces rather than perform those tasks ourselves. Similarly, we would want to be able to vote by mail-in ballot in order to still exercise our right to vote but while still protecting society and those around us from continued infection.

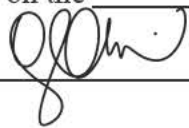
State of Texas

County of El Paso

My name is Ogadinma Obie, MD, my date of birth is [REDACTED] and my address is [REDACTED] USA. I declare under penalty of perjury that the foregoing is true and correct.

Executed in El Paso County, State of Texas, on the 19th day of May 2020.

Declarant



APPENDIX 3

TEXAS DEMOCRATIC PARTY, et. al

IN THE DISTRICT COURT

Plaintiffs,

and

ZACHARY PRICE, LEAGUE OF
WOMEN VOTERS OF TEXAS,
LEAGUE OF WOMEN VOTERS
AUSTIN AREA, MOVE TEXAS
ACTION FUND, WORKERS DEFENSE
ACTION FUND,

TRAVIS COUNTY, TEXAS

Intervenor-Plaintiffs,

v.

DANA DEBEAUVOIR

Defendants,

and

STATE OF TEXAS

Intervenor-Defendant.

201st JUDICIAL DISTRICT

DECLARATION OF CATHERINE L. TROISI

1. My name is Catherine L. Troisi. I am over the age of eighteen (18) years, of sound mind, and in all respects competent to testify. The facts stated herein are true, correct, and within my personal knowledge.
2. I am Associate Professor, Department of Management, Policy, and Community Health and Department of Epidemiology, Human Genetics, and Environmental Sciences and Center for Infectious Diseases, University of Texas Health Science Center at Houston, School of Public Health (UTSPH); Adjunct Associate Professor at Baylor College of Medicine.
3. I am an elected Executive Board Member of the American Public Health Association, a Board Member of International Network of Epidemiology in Policy, an Elected Fellow,

Texas Public Health Association, and a member of the American College of Epidemiology. I have received several awards and honors including the Excellence in Community Service Award, UTSPH, 2013 and 2019, the Association of Schools and Programs in Public Health Service Award, 2018. I was elected to Sigma Xi (Scientific Honor Society) in 1979, received a fellowship from the University of Michigan 1977-1980, and a Eugene B. Casey Fellow at Baylor College of Medicine. I have given invited Legislative Testimony to the US House of Representatives Committee on Homeland Security, Ebola Preparedness, October 2014 Dallas, TX, Governor Perry's Task Force on Public Health Prevention, Ebola Preparedness, October 2014, Austin, TX, Texas House County Affairs Committee, Syringe Exchange Programs, April, 2019, Austin, TX

4. I have a B.A. in Chemistry from The University of Rochester (NY) in 1974, an M.S. in Biochemistry from Michigan State University in 1975, and a PhD in Epidemiologic Sciences from The University of Michigan in 1980, specializing in influenza studies. I completed a postdoctoral position at Baylor College of Medicine in the Department of Virology and Epidemiology. I am a graduate of the National Public Health Leadership Institute at the University of North Carolina and have received post-doctoral training in epidemiologic techniques.
5. My forty-year career in public health has been in the area of infectious disease epidemiology specializing in viruses. I was on the faculty in the Department of Virology and Epidemiology at Baylor College (name was changed to Department of Molecular Virology during my tenure there) from 1983-1996, joined the faculty at University of Texas Health Science Center at Houston School of Public Health in Disease Control and Biological Sciences in 1997. I left academia in 2003 for seven years to practice public health at the Houston Health Department, beginning as Bureau Chief for HIV/STD and Viral Hepatitis Prevention, was promoted to Assistant Director of the Health Department, overseeing the Division of Prevention and Communicable Diseases, and finally creating and filling a new position as Director of Public Health Practice. I rejoined the UTSPH faculty in 2010, in the Departments of Management, Policy, and Community Health and Epidemiology, Human Genetics, and Environmental Sciences and the Center for Infectious Diseases.
6. I was Incident Commander (i.e., in charge of the Houston Health Department's response) in 2009 for the H1N1 influenza pandemic, a respiratory virus.
7. Attached and incorporated by reference to this declaration is a copy of my curriculum vitae.
8. Covid-19 infection is caused by the SARS-CoV-2 virus and is spread by the respiratory route (through the air and through mucous membranes). Reported illnesses have ranged from mild symptoms to severe illness and death. Symptoms can include fever, dry cough, and shortness of breath. Although certain groups such as those over 60 years of age and those with certain underlying medical conditions are at higher risk of serious

illness and death, anyone can be infected with covid-19 and suffer serious outcomes.¹ Additionally, some people do not appear to have any symptoms although may still be able to infect others.²

9. The novel coronavirus is detected through use of a reverse-transcriptase polymerase chain reaction (RT-PCR) test.³ Serologic tests which detect antibodies to the virus are being developed. There has not been adequate testing for the virus anywhere in the United States, including Texas, due to a lack of test kits, lack of testing supplies, and lack of personal protective equipment to protect those healthcare workers taking samples.^{4,5}
10. Within my area of expertise, social distancing, frequent handwashing, and environmental disinfection are the only ways to limit the spread of the virus⁶, as there is no FDA-licensed vaccine that could be administered to elicit immunity to the virus. Social (also called physical) distancing is a proven method to stop spread of viruses spread through the respiratory route such as the novel coronavirus⁷. The novel coronavirus is spread through droplet transmission. These droplets are produced through coughing, sneezing, talking, singing. The droplets are fairly heavy and most studies have shown they can't travel more than about 6 feet⁸, although under certain circumstances, they can travel a longer distance.⁹ Social distancing refers to maintaining a distance of at least 6 feet between persons. The virus can be spread when, for example, an infected person coughs into their hand and touches a polling machine screen; another person then touches that polling machine screen and without washing their hands, touches their eye. The second person can become infected this way.¹⁰
11. Any place where people gather and cannot maintain physical distancing, such as a polling place, represent a heightened danger for transmission of covid-19 disease. Due to the possibility of close proximity (less than 6 ft) of voters, between poll workers, and between voters and poll workers as well as transmission of the virus on polling machine screens, there is risk of spread of the virus at polling places through droplet, airborne, or environmental surfaces. This is particularly important because we are learning that some people who are infected with the novel coronavirus do not have any symptoms but can transmit the virus and/or are infectious before they develop symptoms¹¹. This means that

¹ <https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html> accessed 4/11/20

² <https://www.npr.org/sections/health-shots/2020/03/31/824155179/cdc-director-on-models-for-the-months-to-come-this-virus-is-going-to-be-with-us> accessed 4/10/20

³ <https://jamanetwork.com/journals/jama/fullarticle/2762997>

⁴ <https://www.nytimes.com/2020/03/28/us/testing-coronavirus-pandemic.html>

⁵ <https://www.wbur.org/onpoint/2020/03/18/covid-19-testing-in-the-u-s>

⁶ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html> accessed 4/10/20

⁷ <https://www.nap.edu/catalog/25753/rapid-expert-consultation-on-social-distancing-for-the-covid-19-pandemic-march-19-2020>

⁸ https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fprepare%2Fprevention.html

⁹ <https://jamanetwork.com/journals/jama/fullarticle/2763852>

¹⁰ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cleaning-disinfection.html> accessed 4/10/20

¹¹ <https://www.npr.org/sections/health-shots/2020/03/31/824155179/cdc-director-on-models-for-the-months-to-come-this-virus-is-going-to-be-with-us> accessed 4/10/20

isolating only symptomatic persons will not stop infection as some people may not have symptoms but can still transmit the virus. Instead, we have to assume anyone could be infected and infect another person.

12. Current modeling¹² shows that physical distancing/stay at home orders are having an effect on lessening transmission but that transmission of the virus would continue through July and August even with school closures and between 50 to 90% reduction in non-household contacts. Therefore, a person going to the polls in July or August would be at risk of contracting the virus with subsequent injury to their health.
13. It is important to note that models are only as good as the assumptions put into them. One widely publicized model has revised downward its initial estimates of hospital and intensive care unit beds needed and deaths, due to the impact of social distancing. The modelers specifically state that this model only refers to the first wave of the pandemic and there are likely to be subsequent waves. In addition, some of the assumptions made in this model are that social distancing continues through the end of May and that we have already reached our peak number of deaths. The model also assumes that measures are put in place to guard against the reintroduction of covid-19 from another state or country.¹³ None of these assumptions are likely to occur, in my expert opinion. There is no national strategy for physical distancing and community mitigation and each state, and in some cases, jurisdictions within states, have their own guidelines and regulations.¹⁴ Five states do not have any restrictions placed on congregating while some are in basically lockdown. Texas falls in the middle in terms of restrictions.¹⁵ People can leave the house, and there are a number of essential business which can stay open and where people can congregate. The first state to issue a stay at home order was California on 3 March 2020. Texas was the thirty-fourth state, issuing the first executive order on 2 April 2020.¹⁶ In my expert opinion, the lack of a national strategy and the many exceptions to the closing of businesses hinder efforts to contain and prevent reintroduction of the virus and we can expect community spread of the novel coronavirus to continue for months, including through the summer.
14. In my expert opinion, it is highly likely that the novel coronavirus will continue to be transmitted through this summer. This is based on unavailability of vaccine against the virus, lack of seasonality of the virus, and lack of herd immunity. Therefore, we will still need to be following social distancing guidelines for several months and even if some aspects of those guidelines are eased, large public gatherings, like those at polling places on election day, are likely to pose a health risk.
15. Based on my expertise, it is highly unlikely that a licensed (i.e., FDA-approved and available for mass distribution) vaccine will be available before 12-18 months at the

¹² [https://sites.ens.utexas.edu/sites/default/files/cid/files/covid-](https://sites.ens.utexas.edu/sites/default/files/cid/files/covid-19_analysis_for_22_texas_cities_033020.pdf?m=1585596798)

[analysis_for_22_texas_cities_033020.pdf?m=1585596798](https://sites.ens.utexas.edu/sites/default/files/cid/files/covid-19_analysis_for_22_texas_cities_033020.pdf?m=1585596798) accessed 4/10/20

¹³ <http://www.healthdata.org/covid/faqs> accessed 4/12/20

¹⁴ <https://www.nytimes.com/interactive/2020/us/coronavirus-stay-at-home-order.html> accessed 4/10/20

¹⁵ <https://gov.texas.gov/news/post/governor-abbott-issues-executive-order-implementing-essential-services-and-activities-protocols>

¹⁶ <https://www.kff.org/coronavirus-policy-watch/stay-at-home-orders-to-fight-covid19/#> accessed 4/10/20

earliest¹⁷, and it quite likely will be longer than that. Developing a vaccine is both an art and a science and takes time. There are five steps in vaccine development: pre-clinical stage, clinical development, regulatory review and approval, manufacturing, and quality control. The preclinical stage involves studying the physical makeup of the virus and which parts are likely to elicit protective immunity. It is not always clear which portion that should be, so several different attempts may be necessary. There also are many types of vaccines and one being discussed now, mRNA¹⁸, while theoretically possible, has never been used for a licensed vaccine. Dose and timing of vaccine administration are further variables that need to be evaluated, all of which takes time. Clinical development involves a three-phase process. Phase I is designed to evaluate most frequent and serious adverse effects in a small number of healthy people¹⁹. Once that is determined, the clinical trials are expanded to a larger group of persons whose characteristics (age and physical health) are similar to those for whom the new vaccine is intended. In Phase III, the efficacy and safety of the vaccine is tested in thousands of people. Whether or not the vaccine protects can be difficult to assess and requires a long time as it would be unethical to expose volunteers to the virus to see if they become infected. It also takes a long time to determine if the vaccine causes side effects, as these issues may not become apparent for months. Once a candidate vaccine is deemed safe and effective, manufacturing capacity must be geared up to produce the vaccine on a large scale. Quality control for the vaccine in this increased production is extremely important. Vaccines are given to healthy people and so the bar for safety and effectiveness must be higher than for drugs given to sick people who may be more willing for trade-offs if there are no other options. Another issue in developing vaccine candidates is efficacy in populations for whom the vaccine is particularly important. While every person is at risk of infection if they do not have antibodies, infection is particularly likely to have severe outcomes in vulnerable populations such as older individuals and those with underlying medical conditions. A vaccine that works well in a young, healthy population may not be efficacious in these subpopulations whose immune response is suboptimal and so further vaccine work may be required to protect those most at risk.

16. Herd immunity happens when a high percentage of people in a community become immune to an infectious disease (one that is spread person to person) that it stops or slows down the disease from spreading. This can happen through natural infection or through vaccination. In most cases, 80-95% of the population needs to be immune for herd immunity to take place. Herd immunity protects those in the community who cannot be vaccinated and for whom infection may be very serious, e.g., babies, immunocompromised, cancer patients.²⁰ Based on my experience, without herd immunity in place, it is highly unlikely that the novel coronavirus will disappear by itself. As it is a new virus, no one in the world is immune (except for those who in the last few months have gotten infected and recovered) and, although we don't have tests for antibodies to determine immunity widely available, it is unlikely that a high percent of the population is immune. Another caveat is that we do not know how immunity to this

¹⁷ <https://www.cdc.gov/vaccines/basics/test-approve.html> accessed 4/10/20

¹⁸ <https://www.nih.gov/news-events/news-releases/nih-clinical-trial-investigational-vaccine-covid-19-begins>

¹⁹ <https://www.clinicaltrials.gov/ct2/help/glossary/phase> accessed 4/10/20

²⁰ <https://www.healthline.com/health/herd-immunity#how-it-works> accessed 4/10/20

new virus lasts and whether reinfection can occur with the novel coronavirus. This means that achievement of herd immunity is unlikely to happen before a vaccine is available.

17. Some viruses are more active during certain seasons of the year, referred to as virus seasonality. The novel coronavirus is a new type of virus and so it is difficult to say whether it will exhibit seasonality and whether the virus will disappear in the summer months. However, we can study the seasonality of other coronavirus such as SARS and MERS-CoV.²¹ In both these cases, there does not appear to be a seasonality of infection.²² We also know that the virus has circulated widely in countries with hot, humid seasons right now such as Singapore and Australia.²³ A recent report from an expert panel at the National Science Academies has predicted that we are unlikely to see a diminution of activity of SARS – CoV-2 in the summer.²⁴ Other experts agree.²⁵ Contributing to the lack of seasonality is that the whole world is susceptible to the virus, unlike other viruses for which we do see lower levels in the summer, such as influenza. What this means is that even if virus transmission levels slow down in the summer, there are so many susceptible people that the virus will still be circulating and pose a health risk. The role of school-age children in SARS-CoV-2 spread also may differ from their role in influenza spread.²⁶
18. In my expert opinion, increasing the ability to vote by mail would be a safer option for public health and safety than in person voting, in the likely event that the virus will be circulating during voting season. There is no evidence the virus can be spread by paper, including mail.²⁷ Voting by mail would prevent close interactions and prevent virus transmission between voters, while in line, signing in, and casting votes as well as eliminate possible spread on environmental surfaces, such as voting machines. Not just voters would be at risk of infection, but poll workers as well who are often older and at an increased risk of severe outcome should they become infected. Transmission is a significant risk at polling places because people with undocumented infections (those without symptoms or those who are infectious before they have symptoms) are contributing to spread of the virus²⁸. Therefore, a voter going to the polls could infect others without knowing they themselves are infected.
19. My date of birth is [REDACTED], and my address is [REDACTED], [REDACTED] and [REDACTED] County. I declare under penalty of perjury that the foregoing is true and correct.

²¹ <https://www.ncbi.nlm.nih.gov/pubmed/15522683>

²² <https://www.nap.edu/catalog/25771/rapid-expert-consultation-on-sars-cov-2-survival-in-relation-to-temperature-and-humidity-and-potential-for-seasonality-for-the-covid-19-pandemic-april-7-2020>

²³ <https://www.cnn.com/2020/03/12/asia/coronavirus-flu-weather-temperature-intl-hnk/index.html>

²⁴ <https://www.nap.edu/catalog/25771/rapid-expert-consultation-on-sars-cov-2-survival-in-relation-to-temperature-and-humidity-and-potential-for-seasonality-for-the-covid-19-pandemic-april-7-2020>

²⁵ <https://time.com/5805368/will-coronavirus-go-away-world-health-organization/> accessed 3/23/20

²⁶ <https://www.livescience.com/should-schools-close-for-coronavirus.html>

²⁷ <https://www.cdc.gov/coronavirus/2019-ncov/faq.html#How-COVID-19-Spreads>

²⁸ <https://science.sciencemag.org/content/early/2020/03/24/science.abb3221>

Executed in Harris County, State of Texas, on the 11th day of April, 2020.

Catherine T. Davis, PhD
Declarant

CATHERINE L. TROISI

B.A., M.S., Ph.D.

September, 2019

CONTACT INFORMATION

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Houston, TX 77225

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PRIMARY APPOINTMENT - CURRENT

ASSOCIATE PROFESSOR 2010 TO PRESENT (TENURED)

Primary Appointment: Management, Policy, & Community Health (tenure track)

Secondary Appointment: Epidemiology, Human Genetics, and Environmental Sciences

Co-Coordinator, Leadership Theory and Practice Certificate

University of Texas (UTHealth) School of Public Health, Houston, TX

DUAL/JOINT APPOINTMENT

ADJUNCT FACULTY, DIVISION OF MOLECULAR VIROLOGY AND MICROBIOLOGY

Baylor College of Medicine, Houston, TX

EXPERIENCE & SERVICE

PUBLIC HEALTH PRACTICE

- Director, Office of Public Health Practice, 2008 - 2010, Houston Department of Health and Human Services
- Incident Commander, Public Health, 2009 N1H1 Response, Houston Department of Health and Human Services
- Incident Commander, Public Health, 2005 City of Houston Hurricane Katrina shelter at George R. Brown Convention Center
- Assistant Director, Disease Prevention & Control, Houston Department of Health and Human Services, 2004-2008
- Bureau Chief, HIV/STD Prevention, Houston Department of Health and Human Services, 2003-2004

ACADEMIC APPOINTMENTS

- Assistant Professor (non-tenure research track appointment), Biological Sciences (secondary appointment in Epidemiology) and Member, Center for Infectious Diseases, University of Texas - Houston Health Science Center School of Public Health, Houston, TX, 1997 - 2000 (75% FTE), 2000-2003 (100% FTE)
 - Associate Director, Center for Infectious Diseases, UT-Houston, Health Science Center, School of Public Health, Houston, TX, 2001 - 2003
- Assistant Professor (non-tenure research track appointment), Department of Virology and Epidemiology, Baylor College of Medicine, 1983 - 1991 (62.5% FTE), 1991-1996; name changed to Division of Molecular Virology (70% FTE)

- Supervisor, Eugene B. Casey Hepatitis and HIV Research and Diagnostic Laboratories, Baylor College of Medicine, Houston, TX, 1989 - 1996
- Coordinator, Virology Reference Laboratory, Virology QA Program, DAIDS, Division of Molecular Virology, Baylor College of Medicine, Houston, TX, 1992 – 1993

EDUCATION

University of Michigan, Ann Arbor, MI, Ph.D., 1980, Epidemiological Sciences

- Thesis: Influenza, type C; Antibody Detection & Epidemiology
- Chairs: Arnold Monto, M.D. and H.F. Maassab, Ph.D.

Michigan State University, E. Lansing, MI, M.S., 1975, Biochemistry

- Thesis: Biochemical Effects of Polybrominated Biphenyls on Microsomal Enzymes
- Chair: Steven Aust, Ph.D.

University of Rochester, Rochester, NY, B.A., 1974, Chemistry

LEADERSHIP TRAINING

- National Public Health Leadership Institute, University of North Carolina, Class of 2010

HONORS & AWARDS

- Excellence in Community Service Award, UTSPH, 2019
- Association of Schools and Programs in Public Health Service Award, 2018
- Nominated by UTHealth for Association of Schools and Programs in Public Health Teaching Excellence Award, 2017
- Excellence in Teaching Award, UTSPH, 2017
- American Public Health Association Advocate of the Year Award, 2015
- Advocate Spotlight, The Immunization Partnership, 2015
- Excellence in Community Service Award, UTSPH, 2013
- Elected Fellow, Texas Public Health Association, 2012
- Outstanding Service Award, Texas Public Health Association, 2010
- Eugene B. Casey Fellow, 1985-1990
- Fellowship, University of Michigan 1977-1980
- Elected to Sigma Xi (Scientific Honor Society), 1979

INSTITUTIONAL COMMITTEE ACTIVITIES

- UTSPH Academic Council, 2018 to present
- UTSPH School-wide Curriculum Committee, 2012 – 2015; 2018 - present
- UTSPH Grievance Committee, 2018 - present
- UTSPH CEPH Accreditation Committee, 2017 - present
- UTSPH Faculty Awards Committee, 2016 – present; Chair, 2019 - present
- UTHealth Committee on the Status of Women 2014 - 2018
- UTSPH Practice Committee, 2008 - 2018
- Chair, HDHHS Accreditation Coordination Group, 2008 - 2010
- HDHHS representative to Texas Medical Center Policy Advisory Committee, 2008 - 2010

- HDHHS Legislative Liaison to Mayor's Office, 2008 - 2010
- Investigative Review Committee, HDHHS, Chair, 2008 - 2010
- Epidemiology Committee of Greater Houston Partnership Public Health Task Force, 2004
- State of Emergency Task Force (HIV in the African-American Community), 2003 - 2008
- Member, Quality Improvement Committee - Eugene B. Casey Hepatitis and HIV Laboratory, Baylor College of Medicine, 2003 - present
- Representative for Disease Control and Epidemiology, UT School of Public Health Admissions Committee, 2000 - 2003
- University of Texas - Houston Health Science Center Interinstitutional Biosafety Committee, 1997 – 2003

CONSULTANTSHIPS

- Coalition for the Homeless, 2010-present
- Texas Association of Local Health Officials, 2010, 2011
- Consultant/Mentor, "Bridging the Gap: Addressing Environmental Health Through Science," (collaboration between UTMDACC, UTHSC-Houston, Baylor College of Medicine, Prairie View A&M, PVAM College of Nursing, University of Houston, Texas Southern University, Rice University, San Jacinto College and Lee College, as well as School Districts and Communities in Houston, Baytown, Fresno, and La Joya), L. Jones, PI, 2003 - 2008
- Grant writer for National Hemophilia Foundation, 1996

RESEARCH (LAST THREE YEARS)

ACTIVE GRANTS AND CONTRACTS:

Liver Cancer Prevention among those with Experiences of Homelessness \$1,159,751

V. Schick, PI Cancer Prevention Research Institute of Texas 8/31/2018-8/30/2021

The purpose of this prevention grant is to screen residents of permanent supportive housing for hepatitis B and C, link to care, and treat HCV using a community health worker model.

Role: Co-Principal Investigator

National HIV Behavioral Surveillance among MSM, IDUs, and Heterosexuals in Houston (UT Title:

Behavioral Surveillance Services Agreement) \$1,468,436

U62/CCU606238 Khuwaja, PI; Houston Health Department) 1/1/2016 – 12/31/2020 CDC/ NCHHSTP (1U62PS000977-01)

The purpose of this Agreement is to develop and conduct HIV Behavioral Surveillance activities in Houston/Harris County among men who have sex with men, injection drug users, and heterosexuals living in high-risk areas of Houston. This is a CDC funded project, funded through the Houston Department of Health.

Role: Subcontractor PI (20% FTE)

Improving Access to Care Using Community Health Workers

Fox, PI, Boston University 09/01/2016 - 08/31/2019 US Health Services and Resources Administration \$24,448

Improving access to care: using community health workers to improve linkage and retention in HIV care

Specifically, UT Health will work closely with the BUSPH's Training and TA Director to implement the following activities:

Review and provide feedback on the design of the needs assessment and evaluation tool s for RWHAP providers on integrating CHWs into their health care team; Using the results from the needs assessment, provide expert consultation on topics to be included on the trainings, technical assistance activities and webinar courses related to CHWs ;Provide direct content expertise to support Learning Collaboratives and webinars on CHWs models; Provide input and review to the development of a CHW Implementation Guide for the Initiative; Provide technical assistance and training on integrating CHWs as part of the HIV health care team to RWHAP providers as requested.

Role: Subcontractor PI (4%)

Screening for Hepatitis B and C for Primary Prevention of HCC

Mitral, PI, Baylor College of Medicine). CPRIT. 8/31/2016-2/29/2020 \$202,568

To develop and deliver a community based educational program on viral hepatitis and hepatocellular carcinoma.

The UTSPH subcontract is for community engagement, education, and referral to testing.

Role: PI, Subcontract (15%)

COMPLETED:

Assessing the Needs of Rural Healthcare Providers for the Implementation of Evidence Based Practices

Troisi, PI The Immunization Partnership. 2/1/2015-8/31/2015 \$4,545

To assist with planning and evaluation methods for project, assess study design; participate with monitoring and evaluation efforts with grant partner.

Role: PI (2%)

Community Mobilization to Improve the HIV/AIDS Continuum of Care Among Black Men

5R01MH102171-02 (Kegeles, PI, University of California at San Francisco) 09/12/2013 - 07/31/2016 NIH \$147,255

Conduct extensive formative research, contact organizations providing care to HIV positive black young MSM to identify potential participants. Conduct in depth interviews with young black positive men using focus groups or other strategies to determine seeds and recruitment methods.

Role: PI, Subcontract (10%)

MULTILEVEL HIV PREVENTION INTERVENTION FOR YOUNG AFRICAN AMERICAN MEN

5R01MH096690-04 (Kegeles, PI, University of California at San Francisco) 08/01/2013 - 07/31/2016 NIH \$333,024

UT School of Public Health will administer the multilevel HIV prevention for black men to approximately 333 YBMSM in Houston each year of the project. We will recruit participants into the survey through a combination of convenience sampling of men recruited from venues popular with young black MSM, self-referrals from young black MSM who see recruitment materials in the community, and snowball referrals from other study participants. Data from the formative research will be used to identify community venues where black MSM can be recruited as well as days and times when productive recruitment activities.

Role: PI, Subcontract (15%)

Qualitative Analysis of Stakeholder Meetings

Troisi, PI, The Immunization Partnership 06/15/2016 - 08/31/2016 \$6,322

Qualitative data analysis for the immunization partnership contract. Conduct qualitative analysis on data collected during recorded Immunization Stakeholder Meetings. -Draft a report summarizing trends and outlining key findings with relevant quotations from recordings. -Respond to questions or inquiries from The Immunization Partnership staff regarding the analysis and/or report.

Role: PI (20% FTE)

GRANT REVIEWER/SERVICE ON NIH/OTHER STUDY SECTIONS

- Special Review Panel Viral Hepatitis and Liver Cancer Research: U.S.-Mongolia Pilot Collaborative Award Program, NIH/CRDF Global 2016
- Ad hoc Member, HIV/AIDS Review panel, NIH, 2008
- Ad hoc Member, Epidemiology of Diabetes, Kidney and Infectious Diseases Member Review panel, NIH, 2004
- Grant Reviewer, Paso del Norte Health Foundation/Center for Border Health Research, 2003 - 2005
- Member, EPIC (formerly Epidemiology and Disease Control-2) Study Section, NIH, 2002 - 2004; serving presently as ad hoc reviewer
- Grant Reviewer, Michael Smith Foundation for Health Research, British Columbia's premier funding agency, 2001
- Ad hoc Member, Epidemiology and Disease Control 3 Study Section, NIH, 2000 - 2002
- Special Review Panel - National Institute of Allergy & Infectious Diseases, NIH, 1997
- Ad hoc Member, Epidemiology and Disease Control-2 Study Section, NIH, 1995 - 2002
- Reverse Site Visit - National Heart, Lung, and Blood Institute, NIH, 1992
- Special Review Panel - National Institute of Allergy & Infectious Diseases, NIH, 1990

PUBLICATIONS - H-INDEX=16; 1269 CITATIONS (GOOGLE SCHOLAR)

ARTICLES IN PEER-REVIEWED JOURNALS

<https://www.ncbi.nlm.nih.gov/sites/myncbi/1v1NFrkilz9kt/bibliography/51517383/public/?sort=date&direction=ascending>

1. Balogun, T, C Troisi, M Swartz, L Lloyd, R Beyda Factors associated with Knowledge of where to Access Health Care among Youth in Juvenile Detention: A Mixed Methods Study International (2019) Journal of Adolescent Medicine and Health <https://doi.org/10.1515/ijamh-2018-0128>
2. Troisi, C The time for a Public Health Response is Now! (2018) TPHJ 70: 24-25
3. Balogun, T, C. Troisi, M. Swartz, L. Lloyd, R. Beyda Does Juvenile Detention Impact Health (2018) J Correctional Health Care 24:137-144
4. Malvisi, L., C.L. Troisi, B.J. Selwyn Analysis of the spatial and temporal distribution of malaria in an area of Northern Guatemala with seasonal malaria transmission (2018) Parasitol Res 117:1-16 <https://doi.org/10.1007/s00436-018-5968-6>
5. Balogun T, C Troisi, M Swartz, L Lloyd, R Beyda Does Juvenile Detention Impact Health? (2018) J Correctional Health Care 24:137 – 144 <https://doi.org/10.1177/1078345818763174>
6. Balogun T, C Troisi, M Swartz, L Lloyd, R Beyda (2017) For Drug and Alcohol Use I Would Talk to Mom: A Mixed Methods Study of Detained Youth Journal of Adolescent Health 60(2):S122

7. Ahaneku H, M Ross, J NyoniJ, B Selwyn, **C Troisi**, J Mbawambo, A Adeboye, S McCurdy (2016) Depression and HIV Risk among Men Who Have Sex with Men in Tanzania. *AIDS Care*, 28:sup1, 140-147, DOI: 10.1080/09540121.2016.1146207
8. Troisi C., D'Andrea R., Grier G., Williams S. (2015). Enhanced Methodologies to Enumerate Persons Experiencing Homelessness in a Large Urban Area. *Evaluation Review*. 39(5) 480-500.
9. Obinani C, Lloyd L, Ross M, Troisi C, Onweagba A, Ohazurike N, Chukwu A. 2014 The Development of Poultry Farm Risk Assessment Tool for Avian Influenza in Imo State, Nigeria *Preventive Veterinary Medicine*, 116:145-150
10. Tran TQ, CZ Grimes, D Lai, CL Troisi, LY Hwang. 2012 "Effect of age and frequency of injections on immune response to hepatitis B vaccination in drug users. " *Vaccine*. 30(2):342-9. PMID: 22075088
11. Shahani, L, C. Hartman, C. Troisi, D. Hewett-Emmett, A. Kapadia and T. Giordano. 2012 "Causes of Hospitalization and Perceived Access to Care Among Persons Newly Diagnosed With HIV Infection: Implications for HIV Testing Programs." *AIDS Patient Care and STDs*. 2012 PMID: 22149765
12. Troisi, CL, S.L. Williams and L. Lane. "The Future of Public Health." 2011, *Texas Journal of Public Health*. 63(2): 25-28.
13. Hwang LY, C. Grimes, T.Q. Tran, A. Clark, R. Xia, D. Lai, C.L. Troisi, M. Williams. 2010, *Journal of Infectious Diseases*. Accelerated Vaccine Schedule Improves Hepatitis B Vaccination Adherence and Immune Protection among Drug Users - A Randomized Controlled Trial in Urban Communities in Houston, Texas. 202: 1500-1509. PMCID: PMC2957504.
14. Coker AL, J.S. Hanks, K.S. Eggleston, J. Risser, P.G.Tee, K.J. Chronister, C.L. Troisi, R. Arafat, L. Franzini. 2006 "Social and mental health needs assessment of Katrina evacuees." *Disaster Management Response*. 2006. 4(3): 88-94.
15. Hwang LY, JR Kramer, CL Troisi, L Bull, CZ Grimes, R Lyerla, MJ Alter. 2006 "Relationship of Cosmetic Procedures and Drug Use to Hepatitis C and Hepatitis B Virus Infections in Low Risk Population" *Hepatology*. Vol. 44(2): 341-351
16. Giordano, TP, F Vinegarwala, AC White, Jr, CL Troisi, RF Frankowski, CM Hartman, and RM Grimes. 2005 Patients referred to an urban HIV clinic frequently fail to establish care: factors predicting failure, *AIDS Care*; 17: 773-783.
17. Stancoven, K, LY Hwang, C.L. Troisi. 2005 "Significance of Anti-HBc in the Absence of Other Hepatitis B Markers in a College-aged Population", *Intervirology*. 48: 273-278.
18. Zhao H, H.B. Grossman, G.L. Delclos, L-Y Hwang, C.L. Troisi, R.M. Chamberlain, M.A. Chenoweth, H. Zhang, M.R.Spitz, X. Wu. 2005 "Increased plasma levels of angiogenin and risk of bladder cancer: from initiation to recurrence" *Cancer*. 104: 30-35.
19. Monga, H.K., C.L. Troisi, M.B. Rodriguez, B. Yoffe 2001 "Hepatitis C virus infection-related morbidity and mortality among patients with human immunodeficiency virus infection." *Clin Infect Dis* 33: 240-247.
20. Troisi, C.L. and F.B. Hollinger. 1997 "Detection of Antibodies to Hepatitis C Virus in Seronegative Patients Using an Immune Complex Dissociation Assay" *J. Viral Hepatitis* 4/6, p 383-386
21. Troisi, C.L., F. B. Hollinger, D. S. Krause, and L. Pickering. 1997 "A Comparative Study in Infants of Two Hepatitis A Vaccine Dosing Schedules." *Vaccine*. 15: 1613-1617
22. Troisi, C.L., F. B. Hollinger, D. Krause, and L. Pickering. 1997 Immunization of Infants with Hepatitis A Vaccine (HAVRIX): A comparative study of two dosing schedules *Viral Hepatitis and Liver Disease*, M. Rizzetto, ed, pgs 936-938

23. Troisi, C.L., F. B. Hollinger, and the Delta Hepatitis Study Group. 1997 "Interactions between hepatitis C and HIV in hemophiliacs: Results of a 7-year follow-up study". *Viral Hepatitis and Liver Disease*, M. Rizzetto, ed., pgs 258-260.
24. Troisi, C.L., F. B. Hollinger, D. Krause, and L. Pickering. 1997 Immunization of Infants with Hepatitis A Vaccine (HAVRIX): A comparative study of two dosing schedules *Viral Hepatitis and Liver Disease*, M. Rizzetto, ed, pgs 936-938
25. Troisi, C.L., F. B. Hollinger, and the Delta Hepatitis Study Group. 1997 "Interactions between hepatitis C and HIV in hemophiliacs: Results of a 7- year follow-up study". *Viral Hepatitis and Liver Disease*, M. Rizzetto, ed., pgs 258-260.
26. Sönmez, E., C. Troisi, F.B. Hollinger, H-J. Lin, M. Naem. 1996. "Detection of Hepatitis C Virus RNA by PCR in Hemophiliac Patients". *Journal of Turgut Özal Medical Center* 3: 294-298.
27. Sönmez, E., C. Troisi, F.B. Hollinger, H-J. Lin, M. Naem 1996. "Screening of Blood Donors for HCV RNA by RT-PCR." *Journal of Turgut Özal Medical Center* 3: 303-305.
28. Troisi, C.L., F.B. Hollinger, K. Hoots, C. Contant, J. Gill, M. Ragni, R. Parmley, C. Sexauer, E. Gomperts, G. Buchanan, B. Schwartz, S. Adair, H. Fields. 1993. A multicenter study of viral hepatitis in a United States hemophilic population *BLOOD* 81: 412-418.
29. Troisi, C.L., F.B. Hollinger, K. Hoots et al. 1990. Delta Hepatitis and Liver Disease in Hemophiliacs. *Viral Hepatitis and Liver Disease*. Hollinger, FB, SM Lemon, and HS Margolis, eds. Williams and Wilkins, Baltimore. 487-491.
30. Troisi, C.L. and F.B. Hollinger. 1987. Current anti-HBc tests used to screen donors for non-A, non-B hepatitis are comparable to the original anti-HBc assay. *Transfusion* 27: 438-440.
31. Hollinger, F.B., C.L. Troisi, D.A. Heiberg, Y. Sanchez, G.R. Dreesman, and J.L. Melnick. 1986. Response to a Hepatitis B Polypeptide Vaccine in Micelle Form in a Young Adult Population. *J. Med. Virol.* 19: 229-240.
32. Pepe, P.E., F. B. Hollinger, C.L. Troisi, and D.A. Heiberg. 1986. Viral Hepatitis Risk in Urban Emergency Medical Service Personnel. *Ann. Emer. Med.* 15: 454-457.
33. Hollinger, F.B., C.L. Troisi, and P.E. Pepe. 1986. Anti-HBs Responses to Vaccination with a Human Hepatitis B Vaccine made by Recombinant DNA Technology in Yeast. *J. Infect. Dis.* 151: 153-159.
34. Pepe, P.E., C.L. Troisi, D.A. Heiberg, and F.B. Hollinger. 1985. Viral Hepatitis Risk in Urban EMS Personnel. *Ann. Emer. Med.* 14: 513.
35. Troisi, C.L., D.A. Heiberg, and F.B. Hollinger. 1985. Normal Immune Responses in Persons with Down's Syndrome to Hepatitis B Vaccine. *J.A.M.A.* 254: 3196-3199.
36. Troisi, C.L. and F.B. Hollinger. 1985. Detection of an IgM Anti-idiotypic Directed Against Anti-HBs in Hepatitis B Patients. *Hepatology* 5: 758-762.
37. Chin, T., F.B. Hollinger, R. Rich, C.L. Troisi, G. Dreesman, and J.L. Melnick. 1983. Cytotoxicity by NK-like Cells from Hepatitis B Immune Patients to a Human Hepatoma Cell Line Secreting HBsAg. *J. Immunology* 130: 173-180.
38. Troisi, C.L., and A.S. Monto. 1981. Comparison of ELISA and HAI in a Seroepidemiological Study of Influenza, Type C Infection. *J. Clin. Micro.* 14: 516-521.

BOOK CHAPTERS

39. Troisi, C.L. and F.B. Hollinger. "Overview of Clinical Trials in Low Endemic Areas" In: *Hepatitis B Vaccines in Clinical Practice*, Ronald Ellis, ed., marcel dekker, New York, p179-208, 1993.
40. Troisi, C.L. and F.B. Hollinger. "Hepatitis B Vaccines" In: *Progress in Liver Disease*, vol IX. H. Popper and F. Schaffner, eds, W.B. Saunders Co., Orlando, 1990

INVITED TALKS, PRESENTATIONS, AND POSTER SESSIONS (LAST FOUR YEARS)

1. Houston's 2012 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, June 2012
2. Houston's Point-in-Time Count (invited talk)
2013 Texas Conference on Ending Homelessness, September, 2012, Houston, TX
3. Influenza (keynote address)
Houston Health Department Leadership conference, October 2012, Houston, TX
4. Austin and MMR (keynote address)
Houston Health Department Immunization Inservice, March, 2013, Houston, TX
5. YouthCounts! (invited talk)
Homeless Youth Network, April, 2013, Houston TX
6. Houston's 2013 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, June 2012
7. Hepatitis A (keynote address)
Houston Health Department Immunization Inservice, July, 2013, Houston, TX
8. Homonegativity and depression among men who have sex with men (poster presentation)
National HIV Prevention Conference, December, 2015, Atlanta, GA
P. Padgett, J. Risser, S. Khuwaja, Z. Lopez, C. Troisi
9. Houston's 2014 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, May 2014
10. Results of a sexual behavior survey of 18-24-year-old men who have sex with men (MSM) using Facebook as a recruitment tool. (poster presentation)
P. Padgett, R. Grimes, C. Nguyen, X. Yu, C Troisi
Poster presentation at the 20th International AIDS conference, July 2014, Melbourne Australia
11. Lack of progress in reducing HIV risky behavior by intravenous drug users in Houston: Where do we go from here? (roundtable)
C. Troisi, P. Wermuth, C. Coble, H. Rehman
Roundtable presented at Texas HIV/STD Conference, August, 2014, Austin, TX
12. C. Troisi (oral presentation)
Integration of Community Art and Public Health in Cuba
American Public Health Association Annual Meeting, November 2014, New Orleans, LA
13. Ebola (invited talk)
Weekley YMCA, January 2015
14. Ebola (invited talk)
Zonta Club of Houston, February 2015
15. Houston's 2015 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, June 2015
16. Public Health in Cuba (invited talk)
Community Health Choice, June 2015
17. What is Public Health (invited talk)
Trotter YMCA, July 2015
18. Awareness of HIV Sero-status and Sexual Risk Behaviors Among High Risk Heterosexuals in HMA (poster presentation)
T. Z. Win, P. Wermuth, C. Troisi
Texas Public Health Association annual meeting, March 2016. Galveston, TX
19. Houston's 2016 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, June 2016

20. YouthCounts! in Houston, Texas: A needs assessment (poster presentation)
C. Troisi, G. Grier, W. Fleming
Presented at the American Public Health Association annual meeting, Nov 2016, Denver, CO
21. Houston's 2017 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, June 2017
22. Houston's 2018 Point-in-Time Count (invited talk)
Coalition for the Homeless of Houston/Harris County Lunch and Learn, June 2018
23. Public Health Advocacy: Invited talk at the Houston Global Health Collaborative 7th Annual Global Health Conference March 2019

NON-PEER REVIEWED PUBLICATIONS

1. Houston/Harris County/Ft Bend County Point-in-time Enumeration: 2012 Executive Summary
C. Troisi and the Coalition for the Homeless of Houston/Harris County
<http://www.homelesshouston.org/wp-content/uploads/2012/08/2012-PIT-Executive-summary-final.pdf>
2. Houston/Harris County/Ft Bend County Point-in-time Enumeration: 2013 Executive Summary
C. Troisi and the Coalition for the Homeless of Houston/Harris County
<http://www.homelesshouston.org/wp-content/uploads/2014/06/2013-PIT-Executive-summary-final.pdf>
3. Perceived Needs of Homeless Persons in Houston/Harris County, 2012 C. Troisi, R. D'Andrea Lee, R. Stoll
<http://www.homelesshouston.org/wp-content/uploads/2012/12/2012NeedsAssessmentReport-Aug23.pdf>
4. Houston/Harris County/Ft Bend County Point-in-time Enumeration: 2014 Executive Summary
C. Troisi and the Coalition for the Homeless of Houston/Harris County
<http://www.homelesshouston.org/wp-content/uploads/2014/05/2014-PIT-Executive-summary-final.pdf>
5. Houston/Harris County/Ft Bend County Point-in-time Enumeration: 2015 Executive Summary
C. Troisi and the Coalition for the Homeless of Houston/Harris County
<http://www.homelesshouston.org/wp-content/uploads/2012/08/2012-PIT-Executive-summary-final.pdf>
6. Houston/Harris County/Ft Bend County Point-in-time Enumeration: 2016 Executive Summary
C. Troisi and the Coalition for the Homeless of Houston/Harris County
<http://www.homelesshouston.org/wp-content/uploads/2016/06/2016-PIT-Executive-Summary-v4.pdf>
7. Houston/Harris County/Fort Bend County/Montgomery County 2017 Point-in-Time Count Report C. Troisi, R. Stoll, and the Coalition for the Homeless of Houston/Harris County for The Way Home Continuum of Care.
<http://www.homelesshouston.org/wp-content/uploads/2017/06/2017-Executive-Summary-Final-revised-after-HUD-review.pdf>
8. Houston, Pasadena, Harris, Fort Bend, and Montgomery Counties 2018 Point-in-Time Homeless Count & Survey Report C. Troisi and the Coalition for the Homeless of Houston/Harris County for The Way Home Continuum of Care.

<http://www.homelesshouston.org/wp-content/uploads/2018/05/052418-Final-2018-Homeless-Count-Executive-Summary.pdf>

9. Houston, Pasadena, Harris, Fort Bend, and Montgomery Counties 2019 Point-In-Time Homeless Count & Survey Independent Analysis C Troisi and the Coalition for the Homeless of Houston/Harris County for The Way Home Continuum of Care
<http://www.homelesshouston.org/wp-content/uploads/2019/05/2019-PIT-Report-Final.pdf>

READER ESSAYS AND LETTERS TO THE EDITOR (LTE) ON PUBLIC HEALTH TOPICS:

1. Flu, not Ebola, a pandemic threat to U.S., C. Troisi, Houston Chronicle, September, 2014
2. Surgeon General nominee right for post, C. Troisi, Houston Chronicle, December, 2014
3. Measles outbreak may be difficult to stop, C. Troisi, Houston Chronicle, February 2015
4. Climate change worsens our health, C. Troisi and K. Zhang, Houston Chronicle, September 2015
5. Public health approach can stem gun violence, C. Troisi and S. Williams, Houston Chronicle, February 2016
6. Raise tobacco age to 21, C. Troisi, Houston Chronicle, May 2016
7. Raise tobacco age to 21, C. Troisi, Austin Statesman, May 2016
8. We can stem gun deaths the same way we lowered auto deaths, C. Troisi and S. Williams, Austin Statesman, June 2016
9. Bike safety starts with wearing helmets, C. Troisi, Ft. Worth Star Telegram, June, 2016
10. Bike safety starts with wearing helmets, C. Troisi, Houston Chronicle, June, 2016
11. Zika virus funding (LTE), C. Troisi, Houston Chronicle, July 2016
12. Syringe Service Programs Save Lives, C. Troisi, Austin Statesman, November 2016
13. Is Cold War era 'duck and cover' reality of the future?, C Troisi, Houston Chronicle, April 2017
14. Public Health Prevention Fund, C. Troisi, Austin Statesman June 2017
15. Better Care Reconciliation Act and Prevention Fund, C. Troisi, Houston Chronicle, June 2017
16. ACA and Public Health funding (LTE), C. Troisi, Houston Chronicle, September 2017

INVITED LEGISLATIVE TESTIMONY

1. US House of Representatives Committee on Homeland Security, Ebola Preparedness, October 2014 Dallas, TX
2. Governor Perry's Task Force on Public Health Prevention, Ebola Preparedness, October 2014, Austin, TX
3. Texas House County Affairs Committee, Syringe Exchange Programs, April, 2019, Austin, TX

EDITORIAL AND REVIEW ACTIVITIES

GUEST EDITOR

- International Journal of Environmental Research and Public Health special issue "Emerging and Reemerging Infectious Diseases" 2019

JOURNAL REVIEWER

- Review manuscripts for Cancer Epidemiology, Biomarkers and Prevention, Journal of Leadership Studies, Journal of Pediatric Infectious Diseases, Texas Public Health Journal, Journal of Infectious

Diseases, Annals of Internal Medicine, JAMA, Journal of Immunology, Journal of Medical Virology, Gastroenterology, Journal of Hepatology, American Journal of Tropical Medicine, Health and Place, Evaluation Reviews, and others 1983 – present

ORGANIZATION OF NATIONAL OR INTERNATIONAL CONFERENCES/SYMPOSIA

- Member, Planning Committee, 2005 National HIV Prevention Conference sponsored by CDC, Atlanta, June, 2005; also reviewed abstracts for this committee
- US Conference on AIDS 2005, scheduled be held in Houston, TX October 2005, Chair, Abstract Committee, (event was canceled due to Hurricane Rita)
- Foundation for International AIDS Research and Education International Conference, to be held in Houston, TX 2005, Vice co-chair, National Planning Committee
- International Symposium on Viral Hepatitis and Liver Disease, Houston, TX, Session Chair, April 1990
- International Symposium on Viral Hepatitis and Liver Disease, Houston, TX 1990, Member Local Planning Committee

PROFESSIONAL MEMBERSHIP/ACTIVITIES

PROFESSIONAL SOCIETY ACTIVITIES, WITH OFFICES HELD

- Local/State
 - Texas Public Health Association, 2004 - present
 - Governing Council 2010 - 2016
 - Member, 2011 Annual Educational Conference Planning Committee
 - Chair, Administration/Management Section, 2008 - 2010
 - Member (ex officio), Public Health Accreditation Council of Texas, 2008 -2010
 - Co-Chair, Houston Viral Hepatitis Task Force, 2017 to 2019
 - Science Officer, 2019 - present
 - Houston HIV Monitoring Project Advisory Committee, 2005 – present
 - Enhanced Comprehensive HIV Prevention Plan (ECHPP) Scientific Advisory Council Meeting, 2011 – present
- National
 - Member, National Association of City and County Health Officials, Epidemiology Workgroup, 2009 – 2019
 - Elected to Executive Board, American Public Health Association – 2017 - 2021
 - Member, American Public Health Association, 2004 - present
 - Governing Counselor, Epidemiology Section, 2008 - 2015
 - Chair, Social Committee, Epidemiology Section, 2010
 - Co-Chair, Programming Committee, Epidemiology Section, 2011 – 2013
 - Member, Action Board, 2013- present; chair-elect 2016
 - Member, Joint Policy Committee, 2014-present, co-chair 2016
 - Member, American Association for the Advancement of Science, 1980 - present
 - Elected to Sigma Xi (Scientific Honor Society), member, 1979 – present

- International
 - Board Member, International Network for Epidemiology in Policy, 2019 -present

COURSES TAUGHT, LAST THREE YEARS:

- PH 2998 Shoe Leather Epidemiology
 - Sole instructor
 - Spring Semester, 2019
- PH 3620, Principles and Practice of Public Health
 - Sole instructor
 - Fall semester, 2013-18
- PH 3998, CHP Core II
 - Sole instructor
 - Spring semester, 2016
- PH 5220, Gender and Leadership
 - Co-taught with Dr. E. Gammon, 2013, Sole instructor, 2014-19
 - Spring semester, 2013-2018
- PHD 3950, Advanced Leadership
 - Sole instructor
 - Spring semester, 2013-2015, 2019
- Capstone Class
 - Sole Instructor
 - Summer semester, 2017
- Proposal Development
 - Co-taught
 - Fall 2016, Spring 2017. Fall, 2019

STUDENTS ADVISED, LAST THREE YEARS:

MPH STUDENTS, ACADEMIC ADVISOR (YR, IF GRADUATED)

1. Bao, Thomas – Community Health Practice
2. Berringer, Jennifer – Community Health Practice
3. Bleiweiss, Katelyn – Community Health Practice - 2017
4. Borden, Alisha Nakia - Community Health Practice
5. Brown, Jourdan – Epidemiology - 2019
6. Chau, Dennis - Epidemiology
7. Chee, Allyson - Epidemiology -2018
8. Chima, Nneka – Community Health Practice - 2017
9. Hackett, Gabrielle, Community Health Practice
10. Hornstein, Benjamin – Epidemiology – committee member
11. Maners, Jillian – Epidemiology
12. Moher, Justin – Community Health Practice
13. Ng-Wing-Sheung, Chloe - Epidemiology
14. Ross, Lauren Elizabeth - Community Health Practice -2019
15. Ruff, Jeanne Christine – Epidemiology - 2018
16. Shah, Joel – Community Health Practice -2019

17. Spieler, Zoe - Epidemiology
18. Swamy, Padma – Community Health Practice – 2017
Pasadena-PAHC Study of Social Determinants of Health
19. Trevino, Marcus – Epidemiology
20. Tovar-Yanez, Angel – Epidemiology
21. Veerati, Tejaswi –Community Health Practice 2018
22. Villazana, Rita – Community Health Practice
23. Walker, Rachel – Community Health Practice

MS STUDENTS (ROLE INDICATED BELOW)

24. Markert, Brandi -Epidemiology (academic advisor) 2018
Usage and Awareness of Pre-Exposure Prophylaxis among MSM: Houston, 2014
25. Delgado, Nicole - Epidemiology (academic advisor) 2018
Investigation of Hantavirus and Leptospirosis as Possible Contributing Causes of Unexplained Kidney Disease Epidemic in Nicaragua

DRPH STUDENTS (ROLE AND YEAR, IF GRADUATED, INDICATED BELOW)

26. Dierschke, Nicole Adele – Community Health Practice, committee member
27. Ekworumadu, MarCia – Community Health Practice, academic advisor
28. Guerrero, Rosalia – Community Health Practice, academic advisor
29. Gruenenwald, Paul – Community Health Practice, academic advisor
30. Jackson, Haley Dyanne - Community Health Practice, academic advisor – 2019
Redesigning care: evaluation of a postpartum depression screening and treatment program in obstetric clinics in Houston, Texas
31. Dayoung, Jung – Epidemiology, committee member
32. Rallapalli, Vijayashri - Community Health Practice, academic advisor
33. Sokale, Itunu – Community Health Practice, academic advisor
34. Zangeneh, Ana - Community Health Practice, academic advisor

PHD STUDENTS (ROLE INDICATED BELOW)

35. Cunningham, Raven - Behavioral Science, dissertation committee member Spring 2017
Depression screening using smartphone technologies: A data driven approach
36. Erickson, Timothy – Epidemiology, committee member
37. Haag, Austin Jade - Management, dissertation committee member Spring 2017
Treatment Patterns and Cost Effectiveness of Adjuvant Chemotherapy Sequences among Resected Gastric Adenocarcinoma Patients: A Retrospective Analysis of Medicare Claims Data
38. Lopez, Melissa Stephanie – Epidemiology, academic advisor
39. Pelletier, Jamie – Epidemiology, dissertation committee member
40. Sanchez, Ricci - Management, dissertation committee member 2018
Navigating Health Disparities in Federally Qualified Health Centers' (FQHC) Patient-Centered Medical Homes
41. Sandoval, Micaela – Epidemiology
42. Tooker-Blue, Health – Epidemiology, committee member
43. Tremblay, Jacqueline – Epidemiology, academic advisor
44. Uppal, Tanu – Environmental Sciences, committee member

45. Watkins, Kellie Lee - Epidemiology, academic advisor 2018
Quantifying the Impact of HIV Surveillance and Care Systems on Relinkage to Care

APPENDIX 4

JOSEPH VARON, MD, FACP FCCP, FCCM, FRSM

I am a physician, practicing medicine in Houston, Harris County, Texas. My Board Certifications, Diplomates and other specialty history is placed at the end of this Declaration. I am the Chairman of the Board of United General Hospital, Chief of Staff, Chief of Critical Care at United Memorial Medical Center and United General Hospital in Houston, Professor of Medicine, Surgery and Professor of Emergency Medicine at several universities in Mexico, the Middle East and Europe. I served in fellowships in critical care medicine and pulmonary diseases at Baylor College of Medicine in Houston. I've contributed more than 790 peer-reviewed journal articles, 10 full textbooks, 15 dozen book chapters to the medical literature, am a reviewer for multiple journals, serve as Editor-in-Chief for Critical Care and Shock and Current Respiratory Medicine Reviews, and am recognized for groundbreaking contributions to Critical Care Medicine in cardiopulmonary resuscitation and therapeutic hypothermia, conducting studies and developing technology for selective brain cooling, as an expert in hypertensive crises management. With Dr. Carlos Ayus, I co-described hyponatremia associated to extreme exercise syndrome, and with Mr. James Boston co-described the healthcare provider anxiety syndrome also known as the Boston-Varon syndrome. I've lectured in over 58 different countries around the globe. Professor Luc Montagnier (Nobel Prize Winner for Medicine in 2008) and I created the Medical Prevention and Research Institute in Houston, Texas, where we've conducted work on basic science projects.

I am an expert in Novel Coronavirus19, and spent many months in intense reading, study and preparation for what I anticipated would become and which became the worst pandemic I've ever seen. I have treated, counseled and followed several hundreds of patients who have tested positive for this virus. I have treated in my ICU dozens of critically ill COVID19 positive patients. I have overseen testing for more than 33,000 persons for this malady.

I am one of a worldwide, frontline COVID19 critical care working group.
www.COVID19criticalcare.com

Currently I am devoting significant time to coronavirus patients in my ICU. I am treating many patients with this terrible malady, including patients of all ages. The majority of the 33,000 people we have tested who are positive are young people (19- 54 years of age). Of my patients who are COVID19 positive who require admission to the hospital, 80 percent are people of color.

In my current practice I have seen dozens of such young victims with life-threatening conditions such as clots in their lungs, acute strokes and heart attacks. This disease is a killer.

When a voter is deciding whether to physically expose themselves to these risks by voting they should understand the lethal potential of the disease.

I know the toll it takes on a patient and the entire massive community surrounding the patient to try to save them, and the extraordinary resources devoted to each case, each special person, each with loved ones all focusing on the survival of their friend and family member.

I have devoted my entire professional and personal time to the care of these critically ill patients. My cutting-edge, therapeutic interventions have been implemented in institutions across the world. In our

ICU, we faithfully implement these practices, resulting in a to-date mortality rate of zero. This requires massive resources unavailable to most people in Texas.

May 14th 2020: A look inside a Houston coronavirus unit: Dr. Joseph Varon is fighting COVID-19 as Texas reopens and admissions increase. Los Angeles Times

<https://youtu.be/UK0V0FpnBxM>

I am asking the court to please take specific regard for the physical condition of the voting population of Texas. Texas voters living in the state — as with all people here — have a physical condition that prevents them from appearing at a polling place on election day without a likelihood of injuring their own health.

I would advise every voter to stay away from the polls and vote by mail, for their own safety; no one can be safely said to be immune at this time.

I'm respectfully asking the Court to please consider the health and well-being of Texas voters who — for the present time and, until the pandemic is under control, --- are in reasonable medical probability facing a likelihood of injuring their health, if they appear at a polling place on Election Day, instead of casting a ballot by mail. There is a likelihood of injuring their own health at an open polling place where people congregate, even with all, good faith attempts to control massing. Such congregation of people, where it can be avoided, must be avoided for the time being. Thus, all Texans do indeed have a physical condition constituting a “disability;” they are not immune to coronavirus. Rather, they are quite vulnerable to it.

Currently there is no vaccine and no guarantee that the health resources available could save every voter who will contract COVID19. It's much better to prevent disease acquisition than to try to treat increasing numbers of disease victims.

Even if an individual voter already had symptoms, or improved, or tested positive and then tested negative, there is a likelihood of injuring their health if they appear at the polls on election day. There is a significant risk of reinfection, clinical worsening, and even death.

COVID19 is a very fluid illness. It changes day by day. Clinicians must adapt, change their diagnostic and therapeutically interventions on a frequent basis as new information emerges. No reasonable and prudent person could guarantee that there would not be contagion of Texas voters at the polling stations, and therefore at risk by virtue of their presence.

Any Texas voter checking the disabled box, seeking a ballot my mail -- in these times and until, at least, we have this pandemic under much better control (we clearly do NOT have good control of this pandemic in Texas)--would certainly be acting reasonably and in good faith.

In the upcoming months, we can anticipate a spike of new COVID19 cases.

A vaccine or any type of immunity is far away. It is nearly impossible that the current, physical condition of all Texas voters will change from their condition of a likelihood of injuring their health by voting in person to a physical condition of “immunity” in the next two years

As a matter of health care policy and protection, sending our fellow Texans to the polls instead of allowing a mail in ballot also is a threat to the public health and the safety of the children and families and others to whom these voters could spread the disease, taxing already scarce resources.

The danger to voters' health is great.

The danger to people of color is even greater than to the remainder of the population. People of color, regardless of whether they have preexisting medical conditions or not, are at an exceedingly high risk for development of lethal COVID19 infection complications.

The nature of the virus and its prevalence in Texas has made application of the law racially discriminatory as a matter of fact.

Thus, there is a true likelihood of danger to the health of everyone appearing at the polls on election day, injuring each voters' health.

By exposing voters of color to the polls and requiring their presence in lieu of ballot by mail, the State is greatly increasing the chances that more people of color will be injured. This is far more than "a likelihood." The nature of the virus and its prevalence in Texas has made application of a requirement to show up at the polls racially discriminatory, as a matter of fact.

My credentials include: 1991 Diplomate of the American Board of Internal Medicine.
Board Certified.

1992 Fellow of the American College of Angiology (F.A.C.A.)

1996 Diplomate of the American Board of Internal Medicine, Pulmonary Diseases
Subspecialty (1996-2006)

1996 Fellow of the American College of Physicians (F.A.C.P.)

1997 Fellow of the American College of Chest Physicians (F.C.C.P.)

1997 Diplomate of the American Board of Internal Medicine, Critical Care
Medicine Subspecialty (1997-2007)

1998 Fellow of the American College of Critical Care Medicine (F.C.C.M.)

2005: Diplomate of The American Board of Geriatrics
Certificate Number A5-19604

2005: Fellow of The American College of Geriatrics Specialists (F.A.C.G.S.)

2007: Diplomate of the American Board of Internal Medicine, Pulmonary Diseases
Subspecialty (2007-2017). Re-Certified.

2007: Diplomate of the American Board of Internal Medicine, Critical Care Medicine
Subspecialty (2007-2017). Re-Certified.

2013: Fellow of the Royal Society of Medicine (F.R.S.M.) London, United Kingdom.

2017: Diplomate of the National Board of Physicians and Surgeons in Internal Medicine,
Critical Care Medicine and Pulmonary Disease. (Certificate No. 005885)

1996-to-date: American College of Physicians, Fellow.

- 1997-to-date: American College of Chest Physicians, Fellow.

- 1997-to-date: HispanoAmerican Biomedical Association, Member.

- 1997-to-date: Asociación Latinoamericana del Tórax, Member.

- 1998-to-date: Society of Critical Care Medicine, Fellow.

- 2004-to-date: American Academy of Sleep Medicine, Member.

- 2005-to-date: European Resuscitation Council, Member.

No. 20-0394

The Supreme Court of Texas

IN RE STATE OF TEXAS,

Relator

On Petition for Writ of Mandamus to the Harris County Clerk, the Travis County Clerk, the Dallas County Elections Administrator, the Cameron County Elections Administrator, and the El Paso County Elections Administrator

UNSWORN DECLARATION OF JOSEPH VARON, MD

[declaration of facts]

State of Texas

County of Harris

My name is Joseph Varon, MD, my date of birth is [REDACTED], and my address is [REDACTED]
[REDACTED], USA. I declare under penalty of perjury that the foregoing is
true and correct. Executed in Harris County, State of Texas, on the 18th day of May 2020.


Declarant

APPENDIX 5

No. 20-0394

The Supreme Court of Texas

IN RE STATE OF TEXAS,

Relator

ON PETITION FOR WRIT OF MANDAMUS TO THE HARRIS COUNTY CLERK,
THE TRAVIS COUNTY CLERK, THE DALLAS COUNTY ELECTIONS ADMINISTRATOR, THE CAMERON
COUNTY ELECTIONS ADMINISTRATOR, AND THE EL PASO COUNTY ELECTIONS ADMINISTRATOR

**UNSWORN DECLARATION OF
PAOLO ANGELINI, MD**

1. My name is Dr. Paolo Angelini. I am a cardiologist and a professor of medicine at the Texas Heart Institute and Baylor College of Medicine, in Houston.

2. Based on my qualifications, expertise, and decades of experience in the areas described above, my medical opinions regarding COVID19 and mass gatherings, including election polling places, are as follows:

3. Currently there is no known immunity to COVID19, and there is no FDA-approved vaccine or medication to prevent contagion and transmission of COVID19. Although vaccines are in development, I do not believe a vaccine will be available before the November 2020 election.

4. Based on the published data, models and predictions for the COVID19 epidemic, it appears we might experience a significant resurgence in COVID19 in the fall, while we did not see any significant slowing down of the Pandemic in Texas, as yet. In this circumstance and during

the foreseeable future, we must consider the possibility that any large gatherings of people will place them at increased risk for acquiring COVID19. This would include gatherings at voting sites, especially in larger concentration of people, and especially considering the anticipated long lines at check in and extended voting durations on a lengthy ballot.

5. It would be very difficult to thoroughly sanitize polling areas between each voter, to consistently enforce adequate social distancing measures, and to supply and enforce the proper use of Personal Protective Equipment (PPE) that would be needed to prevent the transmission of COVID19 in a mass-gathering situation.

6. Even with careful attention to hygienic practices, there is a likelihood that any voter without established immunity to COVID19 could contract the disease by participating at a polling place to vote in person. This creates a risk that cases of COVID19 contracted at polling places could ignite new, large outbreaks, potentially similar to those observed in nursing homes or Carnival activities.

7. While it is generally true is that older individuals are at the greatest risk of becoming seriously ill with COVID19, we now recognize that those with co-morbid conditions such as male gender, hypertension, diabetes or obesity are also at increased risk. Moreover, we have seen serious thrombotic complications, such as stroke, pulmonary emboli, or heart inflammation and injury, even in those without known risk factors. There is also a new pediatric inflammatory multisystem syndrome (PIMS) or Kawasaki disease of the heart and coronary arteries, that has been reported especially in young individuals or infants.

8. My expert, medical recommendation is that we should take all steps possible to minimize the congregation of large numbers of individuals until we have a more controlled epidemic activities by reliable testing, developed effective medical treatment (by drugs or

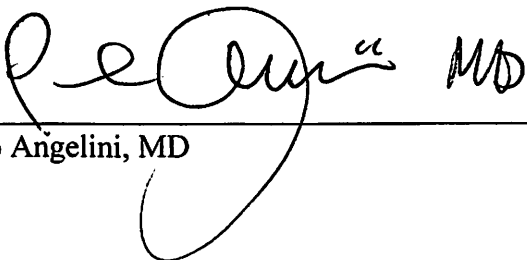
convalescent patient serum antibodies) or developed an effective vaccine leading to demonstrable immunity to COVID19. In all probability, as seen from now, allowing voting by mail will greatly reduce the risk of Texans contracting COVID19 at polling places, which is an important public health preventive measure. We do not know any significant risk caused by using voting by mailing, from our viewpoint.

STATE OF TEXAS

COUNTY OF HARRIS

My name is Paolo Angelini MD. My date of birth is [REDACTED], and my address is [REDACTED] USA. I declare under penalty of perjury that the foregoing is true and correct.

Executed in Harris County, State of Texas, on the 18th day of May 2020.



Paolo Angelini, MD

APPENDIX 6

No. 20-0394

The Supreme Court of Texas

IN RE STATE OF TEXAS,

Relator

On Petition for Writ of Mandamus to the Harris County Clerk, the Travis County Clerk, the Dallas County Elections Administrator, the Cameron County Elections Administrator, and the El Paso County Elections Administrator

DECLARATION OF EBONY RUCKER, M.D.

1. My name is Dr. Ebony Rucker, M.D., and I am an emergency medical specialist who lives in Austin, Texas and is currently treating patients with COVID-19 in El Paso, Texas the University Medical Center of El Paso.

2. I have been in El Paso since March 2020 treating COVID-19 patients.

3. COVID-19, the disease that develops when a person contracts the novel coronavirus SARS CoV-2 ("SARS CoV-2"), is an unpredictable and aggressive disease. It can affect the neurological, cardiological, and pulmonary systems of the body, attacking a patient's organs and potentially causing a number of serious problems for person with the disease, including renal failure or a stroke. COVID-19 is, to put it bluntly, a whole other ballgame.

4. In my medical opinion, the lack of immunity to SARS CoV-2 is a physical condition that makes injury to a registered voter seeking to vote in a polling place more likely.

People of all ages lack of immunity to SARS CoV-2; this is not merely a problem for individuals over the age of 65.

5. This disease is readily transmitted. A polling location, because of the number and frequency of people entering an enclosed space, is the perfect storm of contagion for COVID-19. While I appreciate that the State is attempting to put safety precautions in place, poll workers are not medical professionals. There is a strict protocol and process to the type of cleaning that is required to protect against infection, and poll workers do not have that training. Also, it is not feasible to rely on the poll workers to perform the cleaning: a dedicated person would be needed to be constantly cleaning based on the volume of people entering an enclosed space in a polling facility. A closed space intensifies the spread of the virus, as the particles become concentrated and last longer — increasing the risk of infection. In my experience of voting in elections since I was 18 years old, the polling locations are often crowded and hectic, and certainly not streamlined. I am very concerned that none of the proposed State safety protocols will be sufficient to protect Texas citizens.

6. Even in the hospitals, where medical staff is taking every precaution, some staff is exposed and acquires COVID-19. One mistake de-gloving can cause exposure, even if you are on heightened alert to be careful.

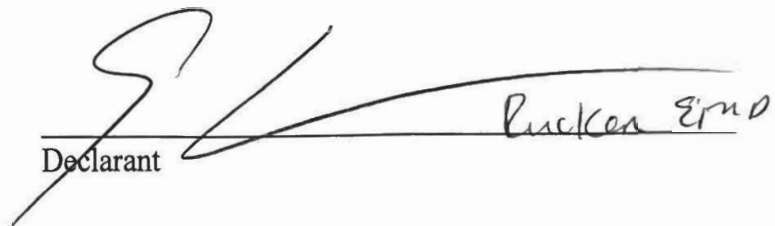
7. Polling places, even taking the best precautions will be centers of infection for COVID-19. To fail to provide people the option of taking the safer route with a mail-in ballot puts their lives at serious risk. It is important to have people feel like they can both express their opinions, but also stay protected. You have to be alive to strive for the American ideals of life, liberty, and the pursuit of happiness.

State of Texas

County of El Paso

My name is Ebony Rucker, MD, my date of birth is [REDACTED] and my address is [REDACTED] USA. I declare under penalty of perjury that the foregoing is true and correct.

Executed in El Paso County, State of Texas, on the 19th day of May 2020.


Declarant Rucker Ebony

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Status as of 05/19/2020 13:17:43 PM -05:00

Associated Case Party: The State of Texas

Name	BarNumber	Email	TimestampSubmitted	Status
Kyle Hawkins	24094710	kyle.hawkins@oag.texas.gov	5/19/2020 1:13:06 PM	SENT

Associated Case Party: Texas Public Policy Foundation

Name	BarNumber	Email	TimestampSubmitted	Status
Yvonne Simental		ysimental@texaspolicy.com	5/19/2020 1:13:06 PM	SENT
Robert Henneke		rhenneke@texaspolicy.com	5/19/2020 1:13:06 PM	SENT

Associated Case Party: McCaffity for Congress

Name	BarNumber	Email	TimestampSubmitted	Status
Debbie Rima		drima@texttrial.com	5/19/2020 1:13:06 PM	SENT
Sean JMcCaffity		smccaffity@texttrial.com	5/19/2020 1:13:06 PM	SENT

Associated Case Party: Remi Garza

Name	BarNumber	Email	TimestampSubmitted	Status
Irene Guerra-Jaramillo		iguerra1@co.cameron.tx.us	5/19/2020 1:13:06 PM	SENT
Juan A. Gonzalez		juan.gonzalez@co.cameron.tx.us	5/19/2020 1:13:06 PM	SENT
Daniel N. Lopez		daniel.n.lopez@co.cameron.tx.us	5/19/2020 1:13:06 PM	SENT

Case Contacts

Name
Peter Kennedy
P Schenkan
Scott Brazil

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llofton@enochkever.com
Envelope ID: 43082156
Status as of 05/19/2020 13:17:43 PM -05:00

Case Contacts

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