



## Personal rights over public Health: Anti-vaccine rhetoric in the Texas Legislature

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### ABSTRACT

During the COVID-19 pandemic, there was an observed increase in anti-vaccine sentiment linked with requirements for the vaccines. But how did these ideas impact the politics of vaccines? In this paper, the authors analyze witness statements from the 2021 Texas Legislative Session during vaccine-related hearings. Specifically, the research focused on five hearings for bills that related to vaccine requirements or vaccine transparency laws filed during the 2021 Texas Legislative Session and witnesses who opposed these measures. From the 128 witnesses cataloged and analyzed, we found 84 witnesses opposed to vaccines. Medical freedom and the right to opt-out of a medical procedure as well as concerns about vaccine safety and effectiveness were most frequently used by witnesses to justify their stance against vaccine requirements or vaccines. While some witnesses were opposed to all vaccines, most focused their objections on the COVID-19 vaccine specifically.

### Introduction

Vaccines are considered one of the top 10 health innovations of the 20th century [1]. However, as a result of the COVID-19 pandemic, there has been a large and sustained decline in childhood vaccinations [2]. Furthermore, vaccine requirements for school, work, and public spaces have become a political flashpoint linked with anti-mandate sentiment [3]. These concerns about vaccines come during a time of political polarization in the US, often promoted by conservative media and leaders [4].

Texas is an ideal case study for understanding how politics impact vaccine bills. It is the second largest state in the US based on population, geography, economy, and birth rate [5–7]. One out of every 10 babies born are in Texas [6]. The gross state product rivals many countries including Australia and Canada [7,8]. Politically, it has a significant rural–urban divide, and all state leadership positions for the past decade have been held by Republicans.

Efforts to weaken Texas school vaccine requirements over the past 20 years have been some of the most organized and politically engaged in the US. Anti-vaccine advocates actively campaign and support candidates for office espousing anti-vaccine positions under the guise of medical and personal freedom [9,10]. Supporters from a vocal anti-vaccine group, Texans for Vaccine Choice, frequently testify before

vaccine-related hearings and organize visits to the capitol during the state legislative sessions. They have aligned themselves with far-right conservatives and the broader libertarian ideology that promotes limited government and mistrust of government institutions and modern medicine [11–13]. Furthermore, Andrew Wakefield, who falsely linked autism and vaccines, lived in Austin for several years where he broadened the anti-vaccine movement visibility through the 2016 movie *Vaxxed* [14]. The Informed Consent Action Network (ICAN), a national anti-vaccination medical freedom organization, also relocated their headquarters to Austin. In addition, the state has garnered increased national attention after a series of laws and executive orders restricting abortions, public health mandates, and transgender access. These activities and policies are models for other conservative legislatures.

Despite the organized anti-vaccine movement within the state and their perceived links to conservative state politics, overall the Texas Legislature was supportive of immunization programs in the past. From 2009 to 2019, of the 21 vaccine-related bills passed 19 were considered pro-vaccine [15]. Legislators over the past decade have consistently passed bipartisan bills, including requiring meningitis vaccine for college students and allowing pharmacists to administer vaccines [15].

In this paper, we analyze witness statements during vaccine-related hearings for vaccine resistant and hesitant rhetoric during the 2021 Texas Legislative Session. The goal of the paper is to better understand

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the types of arguments being proposed, data witnesses present to validate their arguments, and how often witnesses testify to multiple hearings. We focused on five hearings on bills filed that related to vaccine requirements or vaccine transparency laws. From the 128 witnesses, 153 statements were cataloged and analyzed. Many claims were related to safety and effectiveness of vaccines ( $n = 76$ ), but others were concerned with medical freedom and the right to opt-out of a medical procedure ( $n = 65$ ) or made arguments that vaccine requirements are discriminatory ( $n = 42$ ). In addition, several witnesses believed vaccine requirements went against informed consent guidelines ( $n = 30$ ). Interestingly, a number of witnesses ( $n = 30$ ) mentioned specific studies, researchers, or data sets, often inaccurately, to justify that vaccines were unsafe or unnecessary. Overall, the data suggest that pro-vaccination advocates will continue to face challenges in the future promoting vaccine requirements with growing anti-vaccine rhetoric following the COVID-19 pandemic.

## Methods

A content analysis survey was performed on testimonies from witnesses who spoke at public hearings for vaccine-related bills in the 2021 Texas Legislative Session to identify types of arguments used against vaccines.

### 2021 Texas Legislative Session

The Texas Legislature is a bicameral system of elected officials with 150 seats in the House of Representatives and 31 seats in the Senate [18]. The Republican Party controls both chambers (since 2011) as well as the executive branch, including the governor's office, (since 1999), Lt. Governor, and Attorney General. The Texas legislative session lasts for 140 days on odd-numbered years. The 2021 Texas Legislative's regular session lasted from January 12 to May 31, followed by three 30-day special sessions requested by the governor over the summer and fall: 1) July 8 to August 6; 2) August 7 to September 2; and 3) September 20 to October 19 [18]. These special sessions were focused on specific topics that included redistricting, elections and vaccine requirements.

### Research Focus: Vaccine Requirements and Data Transparency

Our research focused on two major areas of contention in the 2021 Texas Legislative Session—requirements and data transparency. Immunization requirement bills were defined as those which proposed a vaccine mandate, promoted removing a vaccine mandate or permitted exemptions for a vaccine mandate. Data transparency bills were defined as requiring either providing more information on immunization and exemption rates for school-mandated vaccines as well as bills which required additional literature and consent documents for FDA-approved vaccines.

These two topics were chosen for several reasons. First, we wanted to focus on issues that would impact all vaccines not just the COVID-19 vaccine. Second, we wanted to analyze hearings that had significant discussion and included public comments. We chose not to include hearings related to COVID-19 vaccine passports bills because there was limited discussion and the bill only impacted identifying individuals immunized with the COVID-19 vaccine. Further, two legislative sessions prior, in 2017, a hearing about vaccine data transparency led to a long and contentious hearing where witnesses opposed to vaccines had many arguments against, including medical freedom, discrimination and privacy concerns. These issues re-emerged in larger public discussions related to opposition of vaccines during the pandemic [12,16,17].

### Bill and Hearing Identification

To identify hearings on vaccine-related bills, we searched the Texas Legislature Online (TLO) database of hearings from 2021 or the 87th

regular (87R) and special sessions (87(1), 87(2), 87(3)) for the keyword 'vaccine' (<https://capitol.texas.gov/>). For each bill, we identified the sponsor(s), committee assignment, bill summary, and their progression during the session to determine if a hearing was scheduled. Bills were excluded that did not have a hearing. Bill content was reviewed and bills were selected that focused on: 1) vaccine requirements (banning requirements or mandating exemptions from requirements) or 2) transparency of vaccine data (increasing data on exemptions or vaccine ingredients).

To ensure all hearings were identified, we verified our list with The Immunization Partnership (TIP). During the legislative session, TIP received alerts: 1) when bills related to vaccines and immunization were filed or progress through the legislative process; and 2) when public hearings were scheduled in committees considering vaccines bills (Senate Health and Human Services, House/Senate State Affairs, House Public Health, House/Senate Public Education). TIP and the authors also verified their work with other state-based advocacy groups including the Texas Medical Association, the Texas Pediatrics Society, the Texas Hospital Association and Rice University's Government Affairs office. While some bills filed might have been missed in the initial search, we believe redundancy in the lists from advocate groups allowed us to identify all hearings related to vaccine requirements and data transparency.

Dates and individuals who testified during each hearing were obtained from the bill records on TLO. As part of their duties, each legislative committee posted a witness list with individuals self-identified positions following a hearing. Videos of committee hearings are archived on the TLO website. Using the date of the hearing and committee assignments for each bill, hearing videos were obtained from [senate.texas.gov](https://senate.texas.gov) or [house.texas.gov](https://house.texas.gov). The hearings were recorded on Zoom and initial transcripts were developed from Zoom's integration with [otter.ai](https://otter.ai), an automated transcription service. The transcripts were reviewed and edited, comparing the text to the video, by at least three members of the research team to ensure they were accurately transcribed. Each witness was identified in the transcript using the publicly available lists for each hearing and then given de-identifying codes prior to the analysis of their statements.

### Hearing Content Analysis

Content analysis for witness statements was conducted from the hearing transcripts. First, each witness was categorized as either supporting, neutral, or opposing vaccines based on how they self-identified on the witness list and the content of their testimony. Witnesses, when signing up to testify, must publicly state whether they are testifying "for," "against," or "on" the bill, which is archived and posted publicly on the TLO website. "On" is considered a neutral position. If the bill proposed improving vaccine access, witnesses who self-identified as "against" the bill were categorized as opposing vaccines. For bills increasing barriers, exemptions or decreasing access, witnesses self-identifying as "for" were included as opposing vaccines. Witnesses categorized as supporting ("for" bills improving vaccine access or "against" decreasing access) or neutral (self-identified as testifying "on" a bill) were excluded. Only witnesses identified as opposing vaccines were selected for analysis.

An initial code book was created based on themes identified in previous research that reviewed witness testimony for vaccine-related bills during the 2017 Texas Legislative session: medical freedom, informed consent and vaccine safety [12]. After an initial review of the regular session hearings, additional content categories were created to capture distinct arguments. All five hearings were reviewed using the final codebook. Each witness testimony was coded by a member of the research team and reviewed by at least two other members of the team in addition to the PI. Disagreements amongst coders were minimal. When it did occur, the research team reviewed theme definitions and discussed the comments until a unanimous consensus was reached.

## Results

To help understand objections and arguments against vaccines and immunizations, we reviewed testimony from hearings during the 2021 Texas Legislative sessions. Of the 7852 bills filed during the 2021 regular and three legislative special sessions, 83 bills were identified from the TLO database that contained the word ‘vaccine’ (Fig. 1). Twenty of these bills had public hearings scheduled. Five hearings were selected for analysis. (Table 1). Three bills focused on vaccine requirements: SB1669-R (regular session), SB51-S3 and HB155-S3 (special session 3) [19–21]. Two vaccine data transparency bills were identified: SB636-R and SB1310-R (regular session) [22,23]. While witnesses discussed the COVID-19 vaccine during all five hearings, only the three bills in the third special session specifically addressed it.

Testimony in the hearings included invited (speakers asked to testify by the bill authors) and public (open to anyone present). Invited speakers were granted approximately 10 min for comments, while speakers during public testimony had three minutes each, although legislators could ask follow-up questions. Hearings lasted from 52 min (SB1310-R) to 5 h and 17 min (SB1669-R), totaling 15 h and 36 min of testimony. Overall, 128 individuals (10 invited and 118 public witnesses) delivered 153 statements, with some individuals giving statements in multiple hearings.

The 84 witnesses were categorized as opposing vaccines and made 102 statements over the five hearings, with several witnesses coming to multiple hearings and even one attending all five. Of the five bills analyzed, one supported increasing immunization data transparency (SB636-R) and was labeled as pro-vaccine. Those witnesses self-identified as ‘against’ the bill were considered to be opposing vaccines. The four other bills, were considered ‘anti-vaccine’ bills since they provided additional exemptions for vaccines (SB51-S3 and HB155-S3), made it harder to get a vaccine (SB1310-R), or banned vaccine

mandates (SB1669-R). Witnesses who self-identified as ‘for’ these bills were categorized as opposing vaccines.

Witnesses had various views and beliefs regarding vaccines. Several witnesses objected to perceived government interference or public health mandates broadly. Others wanted medical exemptions for the COVID-19 vaccine. Another group of witnesses opposed all vaccines and vaccine requirements, several of which gave testimony in multiple hearings. From the 102 statements five major themes arose: Vaccine Safety and Effectiveness, Science, Medical Freedom, Discrimination, and Informed Consent (Table 2).

### Vaccine Safety and Effectiveness

Seventy-six witness statements questioned vaccine safety and effectiveness (Table 2). Most statements (n = 54) were in the SB1669-R hearing, which would have prohibited discrimination based on vaccine status. This particular hearing was noteworthy as the conversation focused on the COVID-19 vaccine; however, the bill would have effectively eliminated all vaccine requirements, even for schools.

Some witnesses objected to all vaccines, stating none were safe or necessary. Witnesses claimed that most vaccines “do not prevent transmission or infection” (HU4805) or that “many outbreaks occurring in highly if not fully vaccinated populations” (R6822). R5996 believed that “about half the shots required, including DTaP [diphtheria-tetanus-pertussis], hep[atitis] B and polio, are for personal protection only, meaning they do nothing to prevent the spread.” However, pertussis, hepatitis B, and polio can spread from person-to-person.

Other witnesses talked about the dangers of vaccines and their side effects including allergic reactions, encephalitis, Guillain-Barre disease and developmental problems. One witness claimed that the measles-mumps-rubella (MMR) vaccine resulted in them developing an “auto-immune disease that threatens my life and my ability to work and care

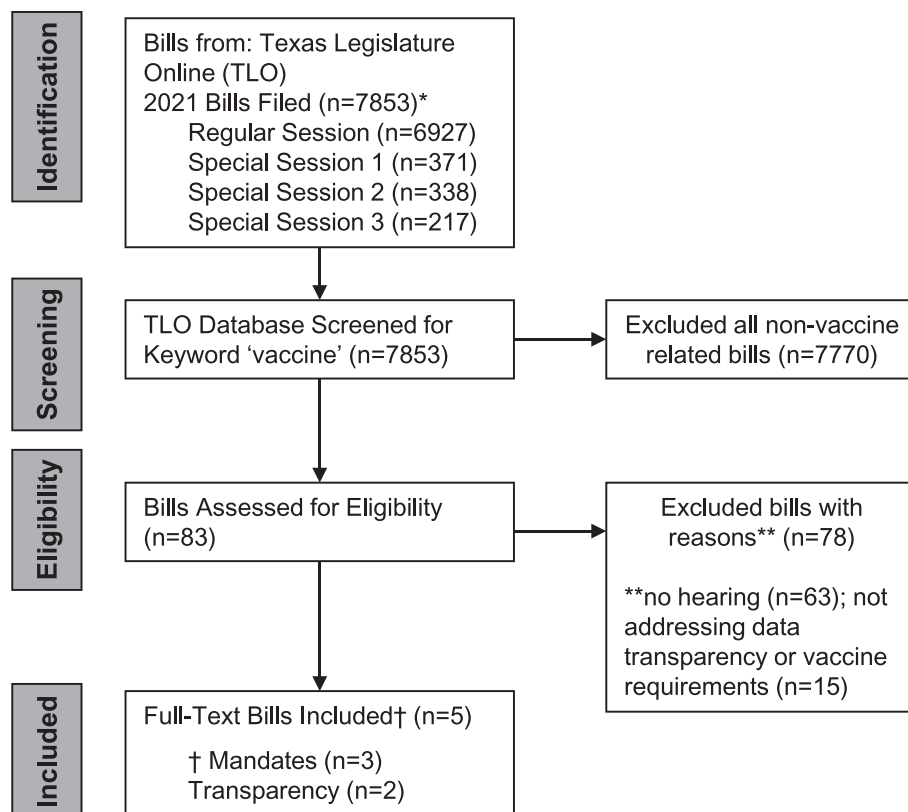


Fig. 1. Identification Schema of Vaccine-Related Bill Hearings in the 2021 Texas Legislative Sessions. The Texas Legislature Online database was searched for bills filed during the 2021 regular and three special sessions for the term ‘vaccine.’ Bills were excluded that did not have a hearing or did not address vaccine transparency or requirements. Five bills were identified and testimony from their hearings were analyzed.

**Table 1**

Content, sponsors, committee assignments, the number of witness statements (and vaccine opposition witness statements) and the hearing summary for vaccine-related bill hearings analyzed from the 2021 Texas legislative sessions.

Bill	Sponsor(s)	Committee	Content	Witnesses (Opposing)*	Summary of Bill/Hearing Content
SB636-R	Seliger, Alvarado, Blanco, Huffman	Health & Human Services	Data Transparency	15(9)	Requires state to provide annual data on vaccine-preventable disease outbreaks and school-level data on exemption rates.
SB1310-R	Hall	Health & Human Services	Data Transparency	10(6)	Requires physicians to obtain informed consent prior to the administration of a vaccine.
SB1669-R	Hall	State Affairs	Mandates	65(54)	Prohibits treating unvaccinated individuals differently from others in public spaces including schools and long-term care facilities (invalidating vaccine mandates).
SB51-S3	Hughes, Paxton, Schwertner	State Affairs	Mandates	29(15)	Prohibits COVID-19 vaccine mandates and vaccination status discrimination; permits exemptions for COVID-19 vaccine requirements.
HB155-S3	Oliverson, Burrows, Noble, Klick, King P.	State Affairs	Mandates	34(18)	Permits exemptions for COVID-19 vaccine requirements for medical or philosophical reasons or due to prior COVID-19 exposure.

\*Note: Opposing vaccine statements means witnesses for SB636-R were “against” the bill and witnesses were “for” the other four bills (SB1310-R, SB 1669-R, SB51-S3, and HB155-S3).

**Table 2**

Major themes and their prevalence in testimony by witnesses opposed to vaccines. Note: total from each theme does not equal the total witness statements because statements could mention more than one theme.

Themes	SB636-R	SB1310-R	SB1669-R	SB51-S3	HB155-S3	Total
<b>Vaccine Safety and Effectiveness:</b> claims that vaccines are dangerous, ineffective, unnecessary, or more data is needed	8	8	40	11	9	76
<b>Science:</b> Mention scientist, scientific publication or data, or scientific organization	4	1	12	6	7	30
<b>Discrimination:</b> bullied or lost rights, privileges or work often linked with privacy issues	5	0	24	6	7	42
<b>Medical Freedom:</b> Right to make medical decisions	3	1	37	12	12	65
<b>Informed Consent:</b> Ethical guidelines, consent process or related to right to be informed of medical procedure	1	7	13	5	4	30
<b>Total Witness Statements</b>	10	7	54	15	16	128

for my family” (SA5812). Others thought that toxins like mercury were in vaccines. Another witness described their son’s reaction to booster shots: “He was extremely healthy prior to [the vaccines] ... [afterwards] he had paralysis of his nervous system. It’s been 10 years, and his health still is not restored to him” (SA2203).

Witnesses alleged that doctors and the government were hiding how dangerous vaccines are: “There is vast under-reporting of vaccine injuries by doctors, especially pediatricians, and that roughly only about 1 % are actually reported” (SA4119). R5966 believed the data provided in the Vaccine Information Statement (VIS) “omits information about the ingredients such as preservatives, adjuvants, additives, and other information about how the vaccine is made” and noted getting “numerous reports by caregivers that they did not even receive the federally required VIS at any point during a shot visit.”

Many witnesses were concerned specifically about the COVID-19 vaccine, especially how they originally got emergency use authorization (EUA) by the US Food and Drug Administration (FDA). SA2985 noted that “an [EUA] is not an approval; in fact, each EUA states the vaccine is not FDA approved.” “We would like to believe [the COVID-19 vaccines are] safe, of course, but the fact is that there’s just no data on it, and making it mandatory to take an experimental vaccine in order to participate in society degrades the safety of the people,” stated SA0173. Several mentioned the lack of accountability for side-effects from the vaccines: “I’m not against vaccines by any stretch, just ones that are experimental, unapproved, and where the providers, hospitals and manufacturers are shielded from liability.” Witnesses made these arguments even after the Pfizer COVID-19 vaccines had full FDA approval for individuals who are 16-years-old and older on August 23, 2021 (Fig. 2).

Because Pfizer and Moderna COVID-19 vaccines used mRNA technology that had never been used before, witnesses were concerned that they would manipulate their DNA. “These are not vaccines like you’ve heard about” said R7564, who claimed “they are literally engineering our cells.” Similarly, FW2719 believed that these vaccines were

manipulating “the instruction sets that determine how my cells operate.”

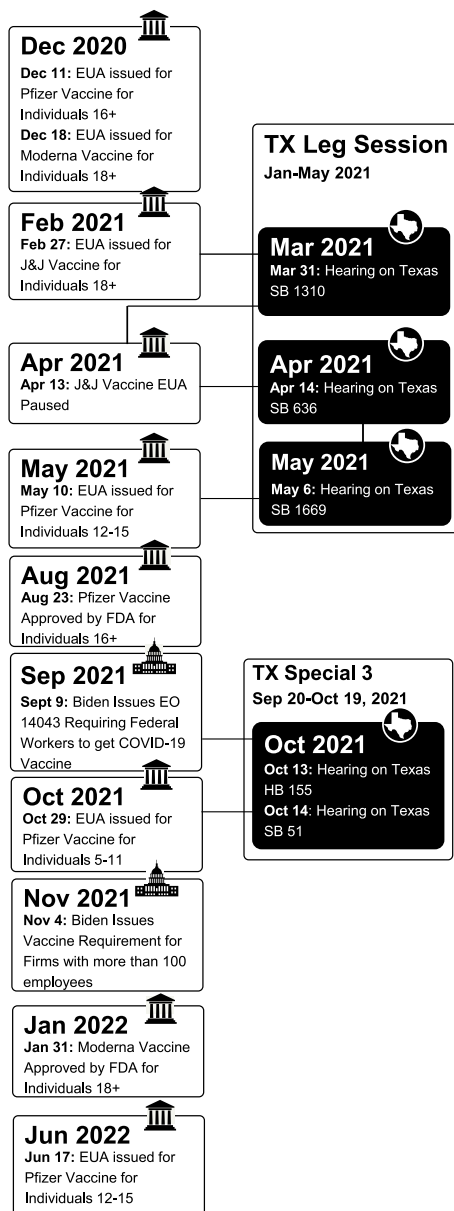
Other concerns were linked to how dangerous the COVID-19 vaccine seemed to be, providing statistics but not citations so the claims could not be validated. SA4917 noted “In January 2021, there were 3,000 records of vaccine-adverse events... Compared to other [vaccines], mortality is 40 times higher.” A physician claimed that “children are now known to have a higher risk of dying from the vaccine than from COVID,” however they did not provide a citation to validate this claim (DA5287). Others mentioned blood clots related to the Johnson & Johnson vaccine. DA7187 believed “people that are vaccinated with COVID and actually get sick after are able to carry 250 times the viral load, and, you know, serve as a virtual COVID flamethrower to the people that are around them.” FW5585 worried that “since both vaccinated and unvaccinated can contract and spread the disease, what is the advantage of taking this vaccine.”

*Science*

Thirty witnesses referenced scientists or scientific data and publications to buttress their claims about vaccines being unsafe or unnecessary. However, most claims were myths, misinterpretations of data, or data that could not be validated.

The Vaccine Adverse Events Reporting System (VAERS) was often cited by witnesses related to the COVID-19 vaccine harms. SA7673 stated: “4178 death[s] are now being reported on VAERS. To give some context over the past 20 years, all vaccinations combined, there [were] a reported 4182 deaths over the past 20 years.” In another hearing, DA5215 mentioned VAERS has over 800,000 adverse events and “the numbers have consistently gone up 25,000 each week.”

Other witnesses argued that the VAERS data were incorrect. SA7673 claimed, “VAERS grossly underestimates the adverse events that are reported,” and mentioning “A study commissioned by the Department of



**Fig. 2.** Timeline of key dates associated with vaccines approvals, Biden Executive Orders (EO) and bill hearings in Texas. Notes: FDA: Food and Drug Administration; EUA: Emergency Use Authorization; J&J: Johnson & Johnson.

Health and Human Services in 2010 and Harvard carried out the study and the conclusion was only one about 1 % of adverse reactions are ever reported to VAERS” [24]. This lack of data was noted in several hearings that VAERS reports was “estimated that that might be 1 to 10 % of the reality” (R5912). While VAERS is known to be limited by under-reporting of minor issues, over-reporting also occurs, especially during times of high levels of media scrutiny [25]. For example, during the H1N1 influenza pandemic in 2009–10, VAERS received a large number of reports, but only 7.2 % were categorized serious [26]. As a result, one cannot estimate adverse event rates from VAERS data alone.

Several witnesses made sweeping claims without providing the source for the data. SA5904 claimed that “in the past coronavirus vaccines have had terrible safety records leading to antibody-dependent enhancement due to pathogenic priming.” SA7673 said “studies have shown a two to three-fold increased risk of adverse reaction to this vaccine if you’ve already had COVID.” SA6822 believed that “vaccination status seems to play little to no role in disease occurrence,” further

stating that “cases of whooping cough have occurred at a rate anywhere from 2 to 6 times higher in vaccinated Texans than in unvaccinated Texans, and the same can be said for mumps.” Several others alluded that “natural immunity” was better than getting a COVID-19 vaccine, including SA7673 who claimed “natural immunity infers a more robust immunity than vaccine immunity could, but vaccinating someone who is already robustly immune increases their risk of adverse reaction, two to three-fold.”

Witnesses also promoted alternative treatments such as hydroxychloroquine and ivermectin, which have been proven to have little to no effect on COVID-19 [27]. SA5904 suggested you could treat COVID-19 with “hydroxychloroquine and ivermectin in combination with vitamin D and zinc” and SA9074 said “we have hydroxychloroquine; we have ivermectin...so there is absolutely no reason for us to even consider taking a vaccine or giving a vaccine to mankind.”

Several witnesses allied to so-called experts. Robert Malone, a scientist who alleged that he invented the mRNA vaccine (although was not directly involved in any vaccine research) was quoted calling “for a stop of [the use of] COVID-19 vaccinations because it enhances immune response, which creates the worst reaction when somebody is exposed to coronavirus” (FW1090) [28]. Research by Harvey Risch, an emeritus professor of epidemiology at Yale School of Public Health was referenced: “by [Risch’s] calculations, 58 % of Texans have herd immunity from natural immunity” (SA4471) [29]. However, Risch nor the witness provided supporting data or peer-reviewed research detailing how these numbers were obtained.

Scientific papers and studies were cited to support concerns about the COVID-19 vaccine. A 2021 *Lancet Respiratory Medicine* paper reporting a phase 2 clinical trial on the use of steroids to treat COVID-19 was discussed by SA4471: “[the authors] found that 90 % of hospitalizations for COVID patients could be prevented” [30]. However, the study showed that the intervention was only partially effective; some side effects were mitigated, but were not eliminated, so the efficacy of this treatment was misrepresented by the witness.

Others claimed medical expertise implying their opinions regarding vaccines should be used as fact. One self-identified physician believed it “is unethical to enforce this mandate on children” (DA 5287). Another witness with “a biomedical science degree and a graduate degree in health” alleged that “mass vaccination is in direct opposition to any code of medical ethics I’ve ever seen” (SA7222).

### Discrimination

Forty-two witnesses discussed “discrimination based on vaccine status” (R0270). Vaccine requirements or posting of school exemption rates, were described as creating “a society where we’re gonna have to show our papers” to prove if you are vaccinated (R0270). SA1912 felt they were “being relegated to a second-class citizen[ship]” and SA0918 also suggested there will be “the creation of a permanent group of second-class citizens: the unvaccinated.” Previous research found that many people who are vaccine hesitant feel pushed and targeted [31]. As a result, they associate with others who have shared feelings of resentment at being excluded [32].

Schools were mentioned as a main location of discrimination. Witnesses referenced instances in which their children were alienated from their peers based on vaccination status. Some issues were hypothetical, such as claims that vaccine requirements would “create hostile school environments” (HU4521) and disclosing vaccination status would “lead to bullying from kids, teachers discriminating against children, and kids not being able to participate in sports” (SA1915). Other witnesses described specific incidents. HU5094 alleged: “the school nurse who received our exemption forms decided that my child was a health threat,” and as a result, they felt that their “...child was seen as unclean or diseased in some way.” DA9935 claimed their child was “segregated, abused by the local school tyranny...” and that their “...daughter has been coned off in PE class while she watches other unmasked children

play.”

Witnesses also cited workplace discrimination, often associated with jobs requiring the COVID-19 vaccine. SA2985 lost their job due to vaccination requirements and believe their “civil rights and liberties [have] been trampled on.” Another described how a field would be impacted “it’s estimated that anywhere between 20 and 40 % of truck drivers... will lose their jobs once the federal mandate is implemented for their industry” (FW8643).

Witnesses also complained that businesses were not honoring medical and nonmedical exemptions for COVID-19. DA1806 stated their bosses “are very well aware that my physicians advised against [the COVID-19 vaccine], but still demanded it if I want to keep my career; my exemptions aren’t being considered...” SA4173 exclaimed, “All of my exemptions were denied by the hospital panel and employment was terminated on April 30. However, a director of 13 years submitted a religious exemption at the same time. His exemption was approved, saving his job. This is a highly subjective process with no objective checks and balances, allowing the hospital to openly discriminate against employees of their choosing.”

A lack of privacy was another issue discussed, related to declaring vaccination status. Legislation such as the Health Insurance Portability and Accountability Act (HIPAA) and the Family Educational Rights and Privacy Act (FERPA) were used as justifications against reporting of vaccination status. SA1915 stated that, “I personally don’t want to be treated like a second-class citizen, segregated or have to have communities be torn apart over what should be private medical decisions protected by HIPAA laws.” HU0451 believed that, “...to violate the medical privacy of any group of children is unacceptable and a violation of the Family Educational Rights and Privacy Act.” While HIPAA does protect against the release of health information without one’s consent, it does not prevent others, including employers, from acquiring that information; therefore, asking about vaccination status is acceptable under HIPAA [33]. In addition, FERPA only applies to personally identifiable information—not de-identified information, such as exemption rates for larger communities such as schools [34]. The general sentiment of witnesses is that they were making independent medical decisions that they should not have to report to the government: “A student’s vaccination status deserves no less protection than their other medical information,” (HU0451).

Restrictions placed during the pandemic, some related to vaccines (although these were not enforced in Texas), were described by witnesses as a form of discrimination. “I have to take the vaccines to get to Europe to see my family,” complained FW5507. Texas Senator Bob Hall, the author of SB 1669, exemplified these ideas, pronouncing: “No one in our society should be hindered from participating in business, schools, or our government just because they have made a very personal decision for themselves, or for their children not to receive a particular vaccine or vaccines.”

### Medical Freedom

In line with making personal decisions about one’s health, 65 witnesses brought up the notion of medical freedom directly or indirectly. Medical freedom as a concept has a long history in the US, linked with libertarianism and the demand for self-determining therapeutic decisions [35]. Politically, it has gained favor more recently linked to the “Right to Try” movement which promotes that individuals have the right to try experimental or unproven interventions regardless of whether they are proven to be safe or effective. This movement works to circumvent the traditional regulatory process for interventions, which is overseen by the FDA [16,36,37]. During the COVID-19 pandemic, protests against requirements often included signs, such as “My body, My choice,” and “No Forced Mandates,” and “You’ll have to kill me before you vaccinate me” [38,39]. These signs emphasize individual choice and an opposition to government control, which are hallmarks of the medical freedom movement [39].

Witnesses expressed particular concerns about individual rights; some emphasizing bodily sovereignty: “Texans are capable of making healthcare decisions for themselves and their children without government interference” (R6348). Others went further and warned that imposing vaccine requirements would lead to the erosion of rights: “If it is made possible for vaccines to be made mandatory, we will start down a slippery slope” (SA0173). Witnesses used references to outside sources to justify their support for medical freedom. For example, religious texts were cited, “the Bible makes it clear that we have been made stewards of our own body” (SA8640). Another witness referenced legal precedents, “Nuremberg Code, the UN International Covenant on Civil and Political Rights article seven, the UN Universal Declaration of Human Rights article three and UNESCO’s article six of the Universal Declaration of Bioethics and Human Rights” (SA7673), all of which they believed vaccine requirements would be a violation of.

Many witnesses displayed a strong characteristic pro-Texas sentiment during their testimonies. Witnesses made references to Texas being a steward of medical freedom that would prioritize individual rights and liberties, such as “Liberty for Texas is the beginning of liberty for America” (R5912). Witness R6348 exhorted, “We must assert here and now that vaccines are always voluntary in Texas. Texans are capable of making healthcare decisions for themselves and their children without government interference.” In a similar vein, witness AU5919 praised Texas for: “the great work [it has] done to keep liberty and information, allowing people to make decisions for themselves.”

Witnesses often tried to appeal that they were the average citizen. For instance, DA5997 said, “As an educator and a parent, I’m here before the committee to support this bill. Not just to ensure my own medical freedom, but for all future Texans who do not yet have a voice.” However, surveys report that the majority of Texas voters support childhood vaccines, at least before the pandemic (Ramsey 2019), indicating that those who spoke up against vaccines may not be the average citizen, but perhaps a vocal minority. Part of the medical freedom call were calls for workers’ rights. Those opposed to vaccines made the point that there was a balance between protecting their individual liberties and “keep [ing] food on the table and pay[ing] a mortgage” (SA2985). In doing so, they constructed a dichotomy between such workers and large corporations or powerful governmental legislators who imposed vaccine requirements.

### Informed Consent

Informed consent was referenced in 30 witness statements, often used as a justification for their assertions of medical freedom. SA5807 cited the American Medical Association that “informed consent to medical treatment is fundamental in both ethics and law; patients have the right to receive information and ask questions about recommended treatments, so that they can make well-considered decisions about care.” Witnesses equated requirements with losing that consent, with one witness simply remarking “informed consent and mandates cannot coexist” (SA5662). Witnesses also asserted that they had the right to refuse the vaccine if they decided that it did not align with what they prefer for their bodies. For example, FW1364 stated, “the US government can’t force me to consent to any medical procedure or injection, especially one that’s under emergency use authorization, has not been FDA approved.”

As noted earlier, several witnesses expressed concerns that the information they received regarding vaccines was not sufficient to guarantee proper informed consent. AU5251 declared, “I found it shocking that the medical establishment still thinks that suppressing information is how they’re going to make people confident... if we’re informed we will make better decisions.”

### Conclusions

Vaccine hesitancy is considered one of the top health challenges of

this decade [1,2,40,41]. It is vital to understand who is hesitant, why they are, and what myths, claims or rationale are used [41]. In this paper, we reviewed witness statements from five hearings during the 2021 Texas Legislative session related to vaccine requirements and transparency. After analyzing 102 witness statements by 84 individuals opposed to vaccines, vaccine requirements or the COVID-19 vaccine, we identified five major themes describing the witnesses that include broad concerns about: vaccine safety and effectiveness, science, medical freedom, discrimination, and informed consent.

By identifying and observing common witness themes like the ones discussed above, vaccine advocates and policymakers can address these concerns more effectively. For example, numerous witnesses were concerned that COVID-19 vaccine mandates did not permit medical exemptions. Other witnesses confused the EUA process with full FDA-approved vaccines, believing that only minimal data were provided. These concerns highlight the need for a public engagement campaign prior to and during the release of a new vaccine to the public. Bolstering public health outreach initiatives to address individuals' greatest concerns will be vital in the future to improve immunization rates and prepare for future outbreaks.

While some individuals were concerned about just the COVID-19 vaccine, other witnesses have previously advocated against vaccines and vaccine programs. These individuals used the pandemic and fears related to the COVID-19 vaccine to promote dismantling vaccine requirements and programs. Thirty witnesses spoke at multiple hearings: with eight witnesses opposing vaccines giving 25 statements during the five hearing. One witness (R7564) spoke at all five hearings and three others spoke at four (R6822, R0270, R6348). All four of these witnesses were identified as being part of the anti-vaccine advocacy group Texas for Vaccine Choice. As a result, policymakers should be aware that these ideas might be perpetuated by a smaller group of vocal individuals and not less prevalent in the general public.

To help counter these claims, more physicians and health care professionals supporting vaccines should consider attending public hearings to refute, in real time, the fallacies and erroneous information given during public testimony. While a point-counterpoint approach may not fully address all the misinformation given, correcting as many points of misinformation during a public hearing goes on the public record and prevents these claims from being further disseminated.

In addition, public health figures should identify new ways to appeal to values that can counter medical freedom and individual right claims, such as working with religious and community leaders to promote vaccines as altruism and kindness. Similarly, a major takeaway from these hearings is that policymakers must address the critical necessity of initiatives to make accurate scientific information more accessible to the public and create programs to enhance the public's scientific literacy. Both issues would best be approached by avoiding a confrontational attitude, despite aggressive behavior by some individuals and organizations opposed to vaccines.

The data presented are focused on witness statements during the 2021 Texas Legislative session. It is not a representative sample of those hesitant or resistant to vaccines. On the contrary, only those with strong opinions for or against vaccines or the specific bills would be willing to take time to participate in these hearings, which occur on weekdays and often during work hours. This is evident by the number of witnesses willing to attend multiple hearings.

In addition, claims, facts and phrases were often repeated by witnesses. This could be a result of listening to others who testified before them, and not because they were original ideas and concerns by the witnesses prior to attending the hearings. By participating in a public session with so many others opposed to the issue, some may have also exaggerated their statements to make a stronger case and gain favor. This makes having public health and physicians rebutting misinformation during the session even more valuable as it could stop witnesses from repeating ideas that has been disproven.

Despite these issues, the data presented are representative of the

major myths being perpetuated by witnesses at public hearings and highlight concerns related to vaccines. Policymakers and advocates for vaccine should be aware of these concerns and issues when promoting new policies and public health measures in the future to help minimize public backlash and hesitancy.

### Credit authorship contribution statement

**Kirstin R.W. Matthews:** Conceptualization, Data curation, Formal analysis, Funding acquisition, Methodology, Project administration, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing. **Rekha Lakshmanan:** Conceptualization, Formal analysis, Funding acquisition, Methodology, Writing – original draft, Writing – review & editing. **Neha Kalakuntla:** Data curation, Formal analysis, Writing – original draft. **Neha Tallapragada:** Data curation, Formal analysis, Writing – original draft.

### Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Kirstin RW Matthews reports financial support was provided by The Greenwall Foundation. Rekha Lakshmanan reports a relationship with The Immunization Partnership that includes: employment..

### Data availability

Data will be made available on request.

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### Data Statement.

The data presented are personal and identifiable public testimony during the 2021 Texas Legislative Session. To protect the anonymity of the witnesses, we cannot provide the full transcripts, but we can share the de-identified excerpts used for coding upon request to the corresponding author.

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