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Balancing safety on the road with risk from COVID-19: A content analysis of policy adaptations by Divisions of Motor Vehicles

Robyn Feiss a, Amanda Hautmann a, Nicole Asa a, Cara Hamann b,c, Corinne Peek-Asa c,d, Jingzhen Yang a,e,*

a Center for Injury Research and Policy at the Abigail Wexner Research Institute, Nationwide Children’s Hospital, 575 Childrens Drive, Columbus, OH 43205, United States
b Department of Epidemiology, University of Iowa, 145 N. Riverside Dr, Iowa City, IA 52242, United States
c Injury Prevention Research Center, University of Iowa, 145 N. Riverside Dr, Iowa City, IA 52242, United States
d Department of Occupational and Environmental Health, University of Iowa, 145 N. Riverside Dr, Iowa City, IA 52242, United States
e Department of Pediatrics, The Ohio State University College of Medicine, Columbus, OH, United States

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ABSTRACT

Purpose: The COVID-19 pandemic significantly altered people’s daily lives, including driving. However, how state Divisions of Motor Vehicles (DMV) adapted their operation policies in response to COVID-19 remains unknown. This study analyzed adaptations to the content of state DMV operation policies during the COVID-19 pandemic across 50 US states and assessed the relationships between these policy adoptions and their state-level COVID-19 restriction orders.

Methods: We merged data on policy adaptations due to COVID-19 obtained from DMV websites for all 50 states with data on state-level restrictions obtained from the National Academy for State Health Policy (NASHP). We created a codebook and analyzed the DMV policy adaptations in the following three areas: (1) road testing, (2) licensure extension and renewals, and (3) facility reopening. Two trained coders independently reviewed and coded the adaptations of policy content related to precaution to spread of COVID-19 and ease of obtaining licensure. We calculated summary scores for policy adaptations and ease of licensure and compared these scores across three categories of state-level COVID-19 restrictions using ANOVA.

Results: DMVs in all 50 states adapted their policies to slow the spread of COVID-19. The ease of licensure summary scores increased in some states but decreased in others. Extensions for licensure renewals was the most common change. Adoption of COVID-19 precautions during the road test was the most common road test adaptation, while road test waivers were the most controversial. Requiring appointments, social distancing, and/or face coverings/personal protective equipment [PPE] were common adaptations during facility reopening. However, variations in level of policy adaptations and ease of licensure were not associated with the state’s COVID-19 restrictions.

Conclusions: Our findings provide insight into policy adaptations made by state DMVs to reduce the spread of COVID-19 and may inform future policy adaptations in DMVs and other government agencies during public health emergencies.

1. Introduction

Novel coronavirus (COVID-19) has resulted in vast disruptions to the daily lives of people of all ages in countries around the world (Cucinotta and Vanelli, 2020). To slow the spread of the COVID-19 infection, governments imposed “stay-at-home” and/or “social distancing” policies and restrictions and closed businesses and activity spaces (e.g., restaurants, schools, gymnasiums, etc.) (Anderson et al., 2020; Hsiang et al., 2020). In the US, state governments took the lead in determining which strategies could keep their residents as safe as possible, with most...
enacting some type of mobility and social gathering restrictions (e.g., stay-at-home orders) (Zhang and Warner, 2020). Studies have demonstrated substantial effectiveness of state lockdown and social distancing mandates in limiting the spread of COVID-19 (Courtemanche et al., 2020; Lyu and Webb, 2020).

Recent preliminary analysis suggests that the COVID-19 pandemic significantly altered people’s daily lives, including driving (Vingilis et al., 2020). Road traffic volumes and mobility activities declined rapidly (Clarke, 2020; Google, 2020); however, frequency of speeding and stunt driving increased, along with speeding-related collisions (Carter, 2020). With the implementation of public health countermeasures, state driver licensing agencies/Divisions of Motor Vehicles (DMV) modified their policies and procedures to balance safety from COVID-19 infection with continuing to provide licensing services to customers (Vingilis et al., 2020). Some of these policy adaptations may have unintended road safety consequences. For example, the state of Georgia issued licenses to nearly 20,000 teens without requiring road testing in order to address a backlog of thousands of road test requests put on hold due to COVID-19 (Lee, 2020). While this amendment in licensing followed “social distancing” requirements and protected against virus exposure, public health experts are concerned about how this change could jeopardize road safety (Insurance Institute for Highway Safety (IIHS), 2018), particularly for teen drivers who already have a high risk of crashing during the first months of unsupervised driving (Gershon et al., 2018; Mayhew et al., 2003; McCarty et al., 2003).

As the pandemic surge plates in some areas, attention has shifted to the lifting of shutdown orders and reopening businesses (Bari et al., 2020). However, reopening before vaccinations are widely available poses risks. DMVs, which oversee driver and motor vehicle licensing and registration, are facing challenges in mitigating these risks while reopening and providing services to the public. Various state agencies developed and implemented policies and plans designed to resume operations as safely as practicable (Kauffman et al., 2020; Taylor et al., 2020). However, limited data are available on what changes DMVs made in their operation procedures to weigh the benefits of social distancing policies against road safety risks (Prunk and Kassler, 2020).

The purpose of this study was to analyze adaptations to the content of state DMV operation policies during the COVID-19 pandemic across 50 US states and assess the relationships between these policy adaptations and their state-level COVID-19 restriction orders. Specifically, we examined the policy adaptations regarding COVID-19 safety and ease of obtaining licensure in the following three content areas: (1) road testing, (2) licensure extension and renewals, and (3) facility reopening.

2. Methods

2.1. Data sources

We searched DMV websites for all 50 states, excluding the District of Columbia and US territories, for data related to adaptations made in response to the COVID-19 pandemic. This search encompassed all pages and tabs of the website between August 10, 2020 and September 18, 2020, including news/press releases linked to the website. We conducted an additional search on December 1, 2020 to extract data from the National Academy for State Health Policy’s (NASHP) The National Academy for State Health Policy (NASHP), 2020) chart about state restriction orders (e.g., Stay-At-Home) made between June 1, 2020 and June 30, 2020 in response to COVID-19. These dates were selected to allow an approximately one-month lag for the influence of state restriction orders on the DMV policies. This study was determined to be non-human research and was waived from approval by the Institutional Review Board at Nationwide Children’s Hospital.

2.2. Data extraction and content area selection

We merged data on DMVs’ policy adaptations due to COVID-19 with data on state-level restriction orders in response to COVID-19 to create a static record of state DMV licensing policy adaptations and state-level restrictions. We then reviewed the static records for each state independently to extract data on adaptations and restriction orders due to COVID-19 made by each state, based on a recent COVID-19 related content analysis (Laestadius et al., 2020). Following the initial data extraction, the authors met to discuss and determine the major content areas. Three areas of policy adaptations were chosen for the content analysis: (1) road testing, (2) licensure extension and renewals, and (3) facility reopening.

2.3. Policy adaptation theme identification

Two coders independently analyzed the adaptations of policy content relevant to the three areas for each state to identify themes. Disagreements on themes were resolved via discussion between all authors. We repeated this process until the final themes were identified for each content area. We identified a total of 14 themes: five themes for road testing, four for licensure extension/renewals, and five for facility reopening.

2.4. State-level COVID-19 restrictions

Two coders independently reviewed the state-level restrictions due to COVID-19 and assigned each state into one of three mutually exclusive restriction categories (Table 1). The three categories were 1) Stay-at-home order: states had a stay-at-home order in place as of June 1, 2020; 2) Increased restrictions: states did not have a stay-at-home order in place as of June 1, 2020, but increased restrictions (i.e., closed business, paused/froze reopening plans, reversed to a previous reopening phase) during this time, and 3) No restrictions/eased restrictions: states never enacted a stay-at-home order or states eased some or all of their restrictions during this time.

Table 1

| Codebook: State-Level COVID-19 Restrictions. |
|-----------------------------------------------|
| Restriction Level | # of States | Definition | Example1 |
| Stay-At-Home Order | 8 | State had and remained a stay-at-home order effective as of June 1, 2020.2 | Stay-at-home order in effect for “March 21 - June 9” (NJ) |
| Increased Restrictions | 17 | State did not have a stay-at-home order between June 1 - June 30, 2020, but increased restrictions such as closing businesses, pausing or freezing reopening plans, or reversing to a previous reopening phase during this time.2 | “June 16: Due to an increase in infections, the governor said the state will not move into the next phase of reopening.” (NV) |
| No Restrictions/Eased Restrictions | 25 | State never had a stay-at-home order OR state eased or lifted some or all restrictions between June 1 - June 30, 2020.2 | “North Dakota never issued a stay-at-home order and instead closed certain businesses.” “June 26: Venues and restaurants could open at 50% capacity. Indoor events with up to 75 people and organized outdoor events with up to 150 people are permitted.” (VT) |

1Data were extracted from the National Academy for State Health Policy’s Chart: Each State’s COVID-19 Reopening and Reclosing Plans and Mask Requirements;
2Dates were selected as they represent the time period approximately one month prior to the start of the initial study search, which likely influenced the state driver licensing agencies’ policies during the time of the study search.
The authors developed a codebook using existing methodologies for policy content analysis (Coxe et al., 2018) and assigned a numerical value to each theme identified. Teen driving safety experts outside the research team reviewed the initial codebook and provided recommendations that were used to finalize the codebook (Table 2). The numerical values were determined based on the precautions mentioned to prevent the spread of COVID-19, with a score of “1” for states adapting a specific precaution policy, “−1” for states not adapting a specific precaution policy, and “0” for states not mentioning a specific precaution policy. For example, a state that waived road tests received a score of “−1”, a state that stated they were not waiving the road test received a score of “0”, and a state that did not mention whether they were waiving the road test received a score of “0”. Furthermore, to address potential unintended consequences on road safety from these adaptations, we determined the influence of each of the 14 themes on ease of licensure. We coded a score of “−1” for a theme that increased the ease of licensure, “1” for a theme that decreased the ease of licensure, or “0” for a theme that had no influence. For example, road test waivers, online knowledge test, extension length made it easier to obtain licensure and each received score of 1 (Table 2).

### 3. Results

#### 3.1. Road testing

DMVs in 31 states adapted their road test policies in response to COVID-19. Five reoccurring themes emerged: (1) road test waivers, (2) online knowledge testing, (3) third party testing, (4) COVID-19 precautions, and (5) road test modifications (Table 3a).

Six states (12.8%), Alabama, Georgia, Mississippi, North Carolina, North Dakota, and Wisconsin, implemented a waiver for road testing during the COVID-19 pandemic. Alabama was the first state to implement a waiver, starting on March 24, 2020, although it is not stated whether waivers were in response to the COVID-19 pandemic. Georgia issued a road test waiver via executive order on April 23, 2020, but quickly issued a second executive order on May 12, 2020 stating that those who were issued licenses via the waiver would have to take a road test by September 30, 2020 to keep their license, due to growing concerns about the impacts of the waivers on road safety (Bari et al., 2020).

Additionally, Arkansas, Iowa, and Nebraska prior to the outbreak only required road tests under limited circumstances, for example if the individual has not completed an approved driver education/driver safety course. Therefore, these states did not need a road test waiver; however, Iowa and Arkansas both stated that road tests would continue to be offered in-person by appointment only for individuals who were required to complete the road test. Requirements for waivers generally included holding a learner’s permit for 6 months to 1 year, completing a specified number of supervised behind-the-wheel training hours, and not having any violations. However, the majority of states (n = 27, 57.4%) specified that road tests would not be waived due to COVID-19.

Two states (4.0%), Iowa and Massachusetts, implemented online knowledge tests in response to COVID-19. Most states (n = 44, 88.0%) did not specifically mention how the knowledge tests had to be
R. Feis et al.

Table 3a
Road Testing.

| Subtheme                        | Score | State n (%) | Quotes                                                                                                                                 |
|---------------------------------|-------|-------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Road Test Waivers²              | 0     | 14 (29.8)   | “The Virginia Department of Motor Vehicles (DMV) is pleased to safely resume road skills testing (behind-the-wheel) (VA)”                  |
|                                 | −1    | 27 (57.4)   | “MDPS will follow all established guidelines … this affidavit serves as a waiver of the road-testing requirement for non-commercial driver’s license.” (MS) |
|                                 | 1     | 6 (12.8)    | “Teens getting their driver’s instruction permit now have the option to take the web-knowledge test that is required to obtain the permit at home.” (IA) |
|                                 |       |             | “The passenger and motorcycle (Class D & M) learners’ permit knowledge exam is available to take…” (MA)                                 |
| Online Knowledge Testing        | 0     | 44 (88.0)   | “DPS-DVS is offering knowledge tests… at 14 exam stations as of May 19.” (MN)                                                          |
|                                 | −1    | 4 (8.0)     | “Most DMV licensing services will be available. The one exception is drive tests… The DMV encourages soon-to-be drivers to reach out to a driving school for testing.” (CO) |
| Third Party Testing³            | 0     | 35 (79.5)   | “Customers can also take the driver license knowledge and skills exams through authorized Third Party Administrators.” (FL)           |
|                                 | 1     | 9 (20.5)    | “All behind-the-wheel drive test applicants will be required to wear a face covering and answer screening questions. Temperature checks will be added to protocols. DMV examiners will wear protective equipment … and place plastic covers on the test vehicle’s passenger seat and floorboard … two windows need to be lowered during the test. Examiners will conduct more of the test outside of the vehicle… The DMV is also … shortening the testing route in many locations…” (CA) |
|                                 |       |             | “All applicants to wear face coverings; all applicants to abide by social distancing requirements; applicants appearing for skills testing to arrive with a sanitized vehicle and face covering (mask)” (MO) |
| COVID-19 Precautions⁴          | 0     | 24 (52.2)   | “DMV has adopted a new procedure for road skills testing that ensures new drivers demonstrate safe driving skills and allows for social distancing for everyone’s health and well-being.” (VA) |
|                                 | 1     | 22 (47.8)   | “… DMV adopted a new procedure for road skills testing that ensures new drivers demonstrate safe driving skills and allows for social distancing for everyone’s health and well-being…” (AK) |
| Road Test Modifications⁵        | 0     | 34 (75.6)   | “… DMV adopted a new procedure for road skills testing that ensures new drivers demonstrate safe driving skills and allows for social distancing for everyone’s health and well-being…” (VA) |
|                                 | 1     | 11 (24.4)   | “… DMV has adopted a new procedure for road skills testing that ensures new drivers demonstrate safe driving skills and allows for social distancing for everyone’s health and well-being…” (AK) |

1 = Not Mentioned, −1 = No, 1 = Yes;²Arkansas, Iowa, and Nebraska do not require road tests, therefore 47 states were included in this subtheme;³Some states mentioned waiving vision requirements to allow for online renewal; however, since this did not pertain specifically to senior citizens, this information was not included in the senior citizen precautions subtheme.

Table 3b
Licensure Renewal.

| Subtheme                        | Score | State n (%) | Quotes                                                                                                                                 |
|---------------------------------|-------|-------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Extension Length                | 0     | 1 (2.0)     | “DMV is also extending the expiration date of any of the following documents with an expiration date beginning March 1, 2020 to September 30, 2020.” (NV) |
|                                 |       |             | “The DMV has instituted a 90-day extension on some credentials expiring between March 1 and May 31, 2020.” (ID)                           |
| Online/Mail Renewal             | 0     | 4 (8.0)     | “Arkansas does not process requests online. Drivers will have to go to their local DMV offices.” (AR)                                   |
|                                 | −1    | 3 (6.0)     | “License renewals must be processed in person by appointment only.” (CT)                                                             |
| Fee Waivers                     | 0     | 43 (86.0)   | “All customers holding a current Colorado id can renew online.” (CO)                                                                  |
|                                 | −1    | 1 (2.0)     | “The $34 renewal fee remains the same.” (WI)                                                                                         |
| Senior Citizen Precautions⁵     | 0     | 42 (84.0)   | “Drivers 70 years and older are receiving a 120-day temporary paper extension in the mail. Drivers 70 + one-year license extension for those that expire between March 1 and December 31, 2020.” (CA) |
|                                 | 1     | 8 (16.0)    | “Individuals who have reached the age of 65 can request a two-year photo license renewal.” (CT)                                      |
|                                 |       |             | “In an effort to further assist our customers 65 years of age and older, the DMV has issued an automatic 1-year extension of a driver license…” (NV) |

¹ = Not Mentioned, −1 = No, 1 = Yes;²Arkansas, Iowa, and Nebraska do not require road tests, therefore 47 states were included in this subtheme;³These state counts and percentages did not include the 6 states that waived the road test or the 3 states that do not require road tests as this category was not applicable to those states;⁴Georgia and North Dakota required COVID-19 precautions to be taken during their road tests for those who were required to take it, therefore 46 states were included in this subtheme;⁵Georgia temporarily waived the road test but made modifications to the road test once road testing resumed, therefore 45 states were included in this subtheme.
Accident Analysis and Prevention 162 (2021) 106400

5

Table 3c
Reopening Precautions.

| Subtheme                        | Score | State n (%) | Quotes                                           |
|--------------------------------|-------|-------------|-------------------------------------------------|
| Appointments                    | 0     | 16 (32.0)   | “As of close-of-business Thursday, July 2, 2020, the DMV will no longer be taking new appointments. ... Starting Monday, July 6, 2020, walk-in service will resume.” (DE) |
|                                | −1    | 7 (14.0)    | “To receive DMV services, you will need to schedule an appointment.” (CO) |
| Social Distancing               | 1     | 27 (54.0)   | “…Limit the number of individuals in a branch at one time to ensure appropriate spacing. Require 6ft of spacing between customers waiting for appointments or walk-in service.” (IN) |
|                                | 1     | 31 (62.0)   | “Social distancing: Exam stations will have social distancing signs and floor decals to help customers and staff maintain the recommended six feet social distance.” (MN) |
| Face Coverings and PPE          | 0     | 15 (30.0)   | “DDS strongly recommends all customers wear PPE while visiting our centers” (GA) |
|                                | −1    | 6 (12.0)    | “All employees are wearing face masks and customers are required to do the same. Plexiglass dividers have been installed at all work stations” (IL) |
|                                | 1     | 29 (58.0)   | “For everyone’s health and safety, a face covering or mask must be worn at all times during your visit.” (RI) |
|                                |       |             | “You are required to wear a face covering. It should cover your nose and mouth during your visit. Please bring your own — we cannot provide one to you. Coverings can include: Surgical masks, Bandannas, Scarves.” (WA) |
| Disinfecting                    | 0     | 36 (72.0)   | “To reduce the chance of contamination, staff have increased cleaning and sanitization procedures in all our facilities, with extra attention to facilities that serve the public and high-touch areas” (IA) |
|                                | 1     | 14 (28.0)   | “Cleaning protocols have been enhanced to sanitize facilities on an ongoing basis” (PA) |
| Health Screening                | 0     | 32 (64.0)   | “All visitors are REQUIRED to complete & pass COVID-19 symptom testing” (KS) |
|                                | 1     | 18 (36.0)   | “Answer health questions and have their temperature taken before being allowed access.” (OK) |

= Not Mentioned, −1 = No, 1 = Yes.

Washington only allowed the knowledge test to be administered by a third party and the remaining 7 states only allowed a third party to be utilized for the road test. The remaining 35 states (79.5%) did not mention anything regarding utilizing a third-party vendor for knowledge or road testing. In some cases, the use of third-party vendors allowed for the continuation of testing while DMVs were closed. Furthermore, this policy can spread out the number of people wanting to complete testing across more facilities, reducing the load on the DMVs after reopening.

Nearly half of states (n = 22, 47.8%) had additional COVID-19 precautions for individuals taking a road test, such as requiring them to disinfect their car before testing, open the windows for increased ventilation, and/or have plastic covers on the seat. This included Georgia, which used contactless road tests after their road test waiver was reversed, and North Dakota, which required a health screening, face coverings/PPE, and the car to be cleaned for those who did not use a road test waiver. The remaining 24 states (52.2%) did not mention any specific instructions for individuals taking the road test.

Lastly, a few states (n = 11, 24.4%) mentioned a modification to the road test due to COVID-19, including Georgia which stated that “…The parent/responsible adult will remain in the vehicle to ride with the driver” regarding required road tests following their temporary waiver. The remaining states (n = 34, 75.6%) did not mention a modification for the road test. Examples of modifications included a closed course-based test, such as Maryland, or having a GPS-camera system installed in the car for DMV staff to remotely observe the driving, used by Alaska.

3.2. Licensure extension and renewals

The DMVs in all 50 states adapted licensure renewal policies in response to COVID-19. Four reoccurring themes based on policy adaptations were identified: (1) extension length, (2) online/mail renewal, (3) fee waivers, and (4) senior citizen precautions (Table 3b). All states (n = 49, 98.0%), except Utah, mentioned an extension length for driver’s licenses expiring during the COVID-19 period. The licensure extension varied by state in terms of extension length, beginning date, and end date. For example, while Kansas extended the deadline to renew a driver’s license or identification card by 10 months, Rhode Island’s extension was only 90 days. Some states specified licensure renewal dates in reference to the time frame of COVID-19 state orders, such as Nebraska, which stated that licenses that “expire on or after March 1, 2020 have been extended until 30 days after the emergency order is lifted. There is no date set for when this order may be lifted.”

The majority of states (n = 43, 86.0%) allowed license renewals online or by mail, while Arizona, Arkansas, and Connecticut stated that they did not process online requests. Some states required the license holder to meet qualifications for online renewal; the most common qualification included being a citizen of the state and the US. Utah’s policy stated that “for those who qualify to do so, renewing a license online is both effective and supports the current directive.”

A few states (n = 6, 12.0%) waived fees associated with licensure expiration, including fees for expired credentials, general late fees, and administrative fees. Only one state (2.0%), Wisconsin, stated that the renewal fee would not change. North Carolina’s policy stated that “any fines and fees related to expired credentials are being temporarily waived.”

Lastly, 8 states (16.0%) mentioned precautions specific to senior citizen residents. These precautions involved additional time for licensure renewal or a licensure extension. Illinois specified that there was a “one-year extension of driver’s license expiration dates for seniors aged 75 and older.” For all states except Colorado and Wisconsin, the extension for senior citizens was longer than the extension for other drivers, with automatic extensions of 1 year or more.

3.3. Facility reopening

Forty-four (88.0%) states adopted policies on safety precautions taken when reopening their offices to the public during the COVID-19 pandemic. Five recurring themes emerged (1) appointments, (2) social distancing, (3) face coverings and personal protective equipment (PPE), (4) disinfecting, and (5) health screening (Table 3c).

Just above half (n = 27, 54.0%) of the states required appointments for customers to enter the DMV building to control the number of customers in the facility at one time. Nevada required appointments in their metropolitan offices, but not their rural offices, “The DMV is serving only customers with appointments at the offices in Carson City, Henderson, Las Vegas and Reno. Rural offices are walk-in based but serve customers from the local area only.” An additional 16 states (32.0%)
encouraged using non-contact (i.e., online, phone, mail) services when possible; for example, Massachusetts’s Registry of Motor Vehicles (RMV) policy stated, “The RMV has a strict no walk-in policy at its Service Centers open to the general public. Reservations are available only for certain necessary and required in-person transactions that cannot be completed online, by phone, or by mail.”

Nineteen states (38.0%) did not provide specific information in their policy about social distancing during facility visits. The remaining 31 states (62.0%) posed various methods to enforce social distancing, including limiting the number of individuals in the office at one time, prohibiting customers from bringing unnecessary guests to their appointment, posted signs/placards, and floor decals. Delaware also specified dedicated hours for seniors and vulnerable populations. Some states provided very specific guidelines; for example, Minnesota’s policy stated that “Exam stations will have social distancing signs and floor decals to help customers and staff maintain the recommended six feet social distance. … Lines may be longer and extend outside at exam stations due to the required six feet between customers.” In contrast, others, such as Alabama, provided a more general statement “ALEA will ensure the public's safety by implementing safety procedures and adhering to all COVID-19 guidelines during each transaction”.

Over half of states (n = 29, 58.0%) required face coverings in the DMV offices. Another 12.0% of states (n = 6) recommended the use of face coverings but did not require them. There was a broad range of specificity on the requirement of face coverings. For example, some states required face coverings and provided examples of types of acceptable face coverings. In contrast, others, such as North Dakota, only requested that customers wear a face covering “If you have a mask, please wear it.” Only 14 states (28.0%) mentioned increased disinfecting practices in their policies, including providing hand sanitizing and/or handwashing stations to customers and regularly disinfecting public spaces. Eighteen states (36.0%) required health screenings to enter the office building, such as a temperature check and/or a COVID-19 symptom/exposure check.

3.4. Summary scores and COVID-19 State-Level restrictions

3.4.1. COVID-19 policy adaptation

COVID-19 policy adaptation summary scores ranged from 0 to 9 (Mean = 4.54, SD = 2.43). Fig. 1A shows the distribution of the of COVID-19 policy adaptation scores by state. The vast majority of states (98%) had scores greater than zero, though Arizona had a score of zero, due to a net of zero adaptations (e.g., adapted one policy and did not adapt a different policy). Thirteen states (26%) had very high scores (7 to 9), 12 states (24%) had high scores (5 or 6), 14 states (28%) had moderate scores (3 or 4) and 10 states (20%) had low scores (1 to 2).

3.4.2. Ease of licensure

The ease of licensure summary scores ranged from -3 to 4 (Mean = 0.74, SD = 1.44). Fig. 1B shows the distribution of the ease of licensure scores by state. Most states (n = 28, 56%) made policy adaptations that increased ease of licensure (scores > 0), with 8 states (16%) having high ease (scores of 3 or 4) and 20 states (40%) having moderate ease (scores of 1 or 2). Twelve states (24%) had scores of zero, indicating no adaptations were made that influenced ease of licensure or the adaptations had a net score of no influence (e.g., one adaptation that increased ease and one that decreased ease). There were also 10 states (20%) whose policy adaptations decreased ease of licensure (score of −3 to −1).

Overall, there were no strong regional patterns in either the COVID-19 policy adaptation or ease of licensure scores. Additionally, the score patterns by state for COVID-19 policy adaptations did not follow the same pattern as ease of licensure—i.e., one did not predict the other.

3.4.3. State-Level COVID-19 restrictions

For the COVID-19 state-level restrictions, 8 states (16.0%) were categorized as having a stay-at-home order, 17 states (34.0%) as increased restrictions, and 25 (50.0%) as no restrictions/eased restrictions. No significant difference in mean summary scores of policy adaptation (p = 0.28) or ease of licensure summary scores (p = 0.72), were observed across the three categories of state COVID-19 restriction orders.

4. Discussion

This study analyzed adaptations to the content of DMV operation policies regarding road testing, licensure extension and renewals, and facility reopening during the COVID-19 pandemic across 50 US states and assessed the relationships between these policy adoptions and their state COVID-19 restriction orders. All states adapted some of their
Accident Analysis and Prevention 162 (2021) 106400

some extent during COVID-19 to balance safety on the road with risk from COVID-19 infection (Bari et al., 2020). Some of these policy adaptations included schools during public health emergencies.

DMV offices as well as other government agencies, businesses, and COVID-19 and may serve as a first look into understanding the types of summary of policy adaptations made by DMVs to reduce the spread of with the levels of states’ COVID-19 restrictions. Our findings provide a summary of policy adaptations made by DMVs to reduce the spread of COVID-19 and may serve as a first look into understanding the types of policy adaptations made by DMVs during the COVID-19 pandemic. These findings could serve as a basis for future policy adaptations in DMV offices as well as other government agencies, businesses, and schools during public health emergencies.

DMVs in 31 states modified their road test policies and procedures to some extent during COVID-19 to balance safety on the road with risk from COVID-19 infection (Bari et al., 2020). Some of these policy adaptations increased ease of licensure, including the most controversial adaptation of providing a road test waiver for teen drivers. Teen-driver crash-related death rates are highest at ages 16 to 17, especially during the first 6 months of driving without supervision (Gershon et al., 2018; Minyew et al., 2003; McCartt et al., 2003). These road test waivers may put new drivers at even greater risk as the road test serves as the last stop for a professional to assess the decision making and driving skills of teens. Our findings show that many states implemented additional procedures during road testing, including disinfecting the car before road testing, opening the windows for increased ventilation, or having plastic covers on the seat. Some states also modified the process of the road test to avoid risk of person-to-person contact by allowing examiners to administer the test from outside the vehicle, including use of a GPS-camera to virtually administer the road test. Future research is warranted to explore potential technology solutions that can be used for safe, efficient, and reliable road testing that does not require examiners and drivers to occupy the same vehicle (Walshe et al., 2020).

The most common adaptations of the DMVs operation policies during COVID-19 were extensions for licensure renewals and allowing online and/or mail-in renewals. While these adaptations increased the ease of licensure in addition to increasing COVID-19 safety, they may have a negative influence on road safety. Issues that could interfere with a person’s ability to drive, such as cognitive impairment or decline, are often caught during in-person licensure renewal procedures, particularly among the senior population (Davis et al., 2020; Tefft, 2014). Therefore, policies that delay visits to the DMV, may impact road safety by allowing individuals with these issues to continue driving without necessary precautions. Future research should examine potential impacts of licensure renewal extensions on crash occurrence and related injuries and fatalities as well as licensure patterns among both novice and older driver groups.

Adaptations pertaining to appointments, social distancing, face coverings/PPE, disinfecting procedures, and health screenings were all made by DMVs for facilities reopening or to remain open. The goal of these adaptations was to maintain the health and safety of the customers and employees when visiting DMV facilities. Similar adaptations, particularly social distancing, face coverings/PPE, and disinfecting, were made by other facilities in the US during reopening including schools (Lordan et al., 2020; Schweingruber et al., 2020), restaurants (Gursoy and Chi, 2020), and workplaces (Parker et al., 2020). While requiring appointments may increase COVID-19 safety by reducing the number of people in the facility at one time, it may make obtaining licensure more difficult, particularly in states where online and/or mail-in renewals are not an option. Furthermore, while limiting the number of customers that can be served in-person on a given day may create a backlog in the licensing process, increasing the number of online and mail-in services could resolve or even reverse a backlog. Further research is necessary to understand the joint influence of these policy adaptations on DMV practices.

Regarding state-level restrictions, 25 states either never had a stay-at-home order in place or had eased their restrictions by June 1, 2020. Our data on dates of state-level restrictions differ somewhat from Zhang & Warner (Zhang and Warner, 2020), who reported earlier dates of lifted restrictions, due to differences in the definition of restrictions (lockdown vs. stay-at-home orders) and sources used (New York Times (The New York Times, 2020) vs. NASHP (The National Academy for State Health Policy (NASHP), 2020). Surprisingly, policy adaptations were not related to the state-level COVID-19 restriction. The variations in levels of restrictions or time of implementation of stay-at-home orders between states and over time (Zhang and Warner, 2020; The National Academy for State Health Policy (NASHP), 2020) may be partial.

Fig. 1B. Distribution of the ease of licensure scores by state; higher scores indicate increased ease of obtaining licensure.
4.1. Limitations and future directions

A few limitations of this study should be noted. First, information regarding the date(s) on which these state policy adaptations were enacted was not always available. Therefore, it is possible that some policies, such as road test waivers and online knowledge testing, were in place prior to the COVID-19 pandemic or reversed at the time of our search. Secondly, the unprecedented nature of the COVID-19 pandemic requires frequent changes in policies to respond to COVID-19. Therefore, DMV policies and state-level restrictions may have changed frequently throughout the pandemic. We used a static record (i.e., download of webpage) to extract data from; thus, the data we extracted and reported here may not be consistent with current DMV policies nor reflect state-level restrictions. Therefore, it is possible that some policy adaptations were not always available. Therefore, it is possible that some lack of information about road testing changes or fee waivers likely means that these policies are not in place, while a lack of information on disinfecting policies may not indicate a lack of disinfecting practices, as disinfecting procedures have become commonplace in nearly all places of business during the COVID-19 pandemic (Hora et al., 2020; Centers for Disease Control and Prevention (CDC), 2021).

4.2. Practical and policy implications

Many of these COVID-19 related policy adaptations impact the ability of DMVs to serve customers more safely and efficiently during the pandemic, and it is unclear if they will retain any of these changes for the long term. For example, continuing to allow online or mail-in renewals may increase the number of customers that can be served over the same period of time, making it advantageous to retain. This adaptation may also remove barriers for individuals who are unable to make appointments due to work, child caring responsibilities, or lack of transportation. Potentially improved efficiency and convenience needs to be carefully weighed against any influence on road safety, as these changes reduce opportunities to screen for risky drivers. At the policy level, such adaptations provide examples of approaches and considerations that can help DMV agencies adapt in the event of a public health emergency, particularly one that requires limited person-to-person contact. It is possible that many of these policy changes will continue beyond the COVID-19 pandemic or provide the groundwork for future policy changes both in the DMVs and other government facilities.

5. Conclusion

All 50 states adapted their DMV policies in some capacity in response to the COVID-19 pandemic. Surprisingly, these adaptations were not related to the state-level of COVID-19 restrictions. The overarching goal of these policy adaptations was to balance the health of DMV customers and employees with maintaining practices that increase road safety. Some policy adaptations, such as road test waivers, seemed to favor health over road safety, while others, such as requiring appointments to visit the DMV facility, were more balanced. Future research, particularly longitudinal studies, are necessary to understand how these policies changed throughout the pandemic and the long-term impact of these policy adaptations on road safety.

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CRediT authorship contribution statement

Robyn Feiss: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Validation, Visualization, Writing – original draft, Writing – review & editing. Amanda Hautmann: Conceptualization, Data curation, Investigation, Methodology, Writing – original draft, Writing – review & editing. Nicola Asa: Conceptualization, Data curation, Investigation, Methodology, Writing – original draft, Writing – review & editing. Cara Hamann: Conceptualization, Methodology, Visualization, Writing – review & editing. Corinne Peak-Asa: Conceptualization, Methodology, Writing – review & editing. Jingwen Yang: Conceptualization, Methodology, Project administration, Supervision, Validation, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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