

# Appendices for *BTSCR* Research Report 6 (BTSCR Project BTS-11)

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## **APPENDIX A: Implementation of Research Findings and Products**

The research provides a new foundation for implementing initiatives to increase the use of child restraint systems (CRS) in rideshare and taxis. Findings include new data to indicate that child restraint use is lower in rideshare and taxis than in personal vehicles. The findings also highlight opportunities for interventions to address gaps in usage such as legislation to remove exemptions in the coverage of state and city child passenger protection laws, regulations to encourage rideshare and taxi industries to facilitate improved child passenger protection, and approaches for incentivizing the introduction of new products that could lead to improved child passenger protection.

Further research would be needed to overcome the limitations of the self-report survey methods used in this study and improve the objectivity – and perhaps the accuracy – of the findings of this study. However, some safety officials and advocates, including those in State Highway Safety Offices, may judge these findings to be sufficient to warrant action. Based on the legislative review and input from the Advisory Group, the following opportunities may be helpful to pursue:

Targeting State/City Legislation or Regulation: Additional state and/or city laws could be constructive, both through direct effects on compliance by parents, caregivers, and rideshare corporations, and through their indirect influence in communicating safety expectations to these groups and other stakeholders. Exemptions for rideshare vehicles in child passenger protection laws could be removed in seven states and exemptions for taxis could be removed in 28 states. Considering the strong effect that use laws had on child restraint use in private vehicles, these legislative amendments will be critical for optimizing child safety.

In addition, innovative new legislation that places more responsibility on rideshare and taxi companies for providing CRS for customers with children and/or facilitating their use may be an effective means for increasing use rates. Such legislation could be pilot tested and evaluated to assess effectiveness and encourage replication.

Targeting Ridesharing and Taxi Corporations: There is a need to explore the limits of rideshare corporation collaboration on this safety problem and find ways to improve the safety of children without hurting the economic situation of the drivers. Rideshare corporations should share responsibility for protection of child passengers rather than placing the onus on drivers or parents. Advocacy from respected safety leaders may be effective in highlighting the potential role of corporations in reducing barriers to child seat use in rideshare vehicles and encouraging these businesses to act even without legislative mandates. Examples of meaningful corporate engagement could include voluntary provision of sanitized CRS in all vehicles or in a widely available subset of vehicles at no or low additional cost. Such a program should be accompanied by training for drivers on proper use of CRS.

Targeting Rideshare and Taxi Drivers: With corporate support and financial incentives, drivers could be encouraged to install appropriate CRS in their vehicle. This could enable them to offer affordable, specialized rideshare or taxi services for parents with younger kids, which the parent would request when hailing the vehicle.

Targeting Pediatricians, Other Health Professionals and Child Passenger Safety Technicians: Health and safety professionals who interact with parents and caregivers could provide guidance and education on best practices for child safety in for-hire vehicles. Professional associations such as the American Academy of Pediatricians that produce TIP sheets for professional education could add a section to their written TIP guidance documents aimed at educating other practicing pediatricians and professionals on traveling with infants and children in rideshare or taxi vehicles.

Targeting Safety and Consumer Advocacy Groups: Organizations such as Advocates for Highway and Auto Safety, the Insurance Institute for Highway Safety, and Consumer Reports could be involved in advocacy efforts to encourage ridesharing corporations to share responsibility for child passenger safety and to disseminate information to parents and caregivers.

Targeting the Travel industry: Airlines, travel agents and hotels routinely provide information to travelers about their destination. This could include information about child restraint laws in the state or city destination and ways to travel safely with children.

Targeting the U.S. Department of Transportation. Funding opportunities or other incentives could be explored to stimulate manufacturers to develop products that may be in the public interest but not otherwise profitable. One example could be portable or lightweight child seats that would be very convenient for rideshare users but may be unprofitable for manufacturers. Consumer information programs – such as the New Car Assessment Program – could be used to recognize innovation and stimulate development and marketing of practical travel versions of child safety seats.

## **APPENDIX B: Strengths and Limitations of the Research and Recommendations for Additional Research**

**Overview:** The research captures a broad view of factors associated with the use of child restraint systems (CRS) and seat belts in rideshare and taxis by using information from self-report surveys of parents and rideshare and taxi drivers, together with expert opinion from a highly qualified international Advisory Group and objective data from analyses of state and city laws and corporate policies.

**Strengths of the Research:** These sources provide new insights on the extent of the gap in CRS and seat belt use between personal cars and for-hire vehicles and suggest a range of interventions that could help close the gap. Considering the challenges involved in objectively and accurately quantifying CRS and seat belt usage in rideshare and taxis, the methods incorporated in the research provide a reasonable estimate of the nature of the problem.

**Limitations of the Research:** Because the survey data are based on self-report, the research findings may be affected by sampling bias, social desirability bias, or recall bias. These limitations may result in an underestimate of the extent of the problem.

A further limitation of the research was not receiving input from either the rideshare or taxi industries. Despite efforts to encourage their participation, the researchers were unable to engage experts from these sectors to provide insights on how rideshare and taxi corporations could facilitate improved child restraint use and how these industries could be encouraged to collaborate on solutions.

**Recommendations for Additional Research:** Next steps for research to support efforts to increase the use of CRS in rideshare and taxis could include epidemiology and implementation and evaluation studies. To overcome the biases inherent in self-report data on a socially desirable behavior such as CRS use, further studies could be designed to incorporate methods that could monitor use objectively and on a sufficiently broad basis so that findings could be generalizable. Of available alternatives, naturalistic driving video data collection is particularly promising, providing that privacy concerns can be resolved.

Implementation and evaluation research is needed to compare approaches to obtaining state and/or city laws or regulations, including closing gaps in child passenger safety laws and exploring strategies for motivating rideshare and taxi industries to share the responsibility for child passenger protection by providing CRS when needed. Implementation studies could examine approaches for incentivizing automobile and CRS manufacturers to market either built-in or easily portable CRS.

## **APPENDIX C: Advisory Group Comments and Recommendations**

On Tuesday May 17<sup>th</sup> and Tuesday May 31<sup>st</sup>, 2022, a group of twelve experts and the research team from the Johns Hopkins Center for Injury Research and Policy gathered for virtual meetings to review the findings of the studies conducted by the research team and to provide input on tasks for BTS-11 (Tasks 3, 6, 7, 8 and 9 – listed below). The list of attendees is provided in Table 1 in the main body of this report.

### **Task 3: Identify international policies and practices for CRS use applicable to the US**

The group pointed out that certain products that are available in Europe may offer advantages in portability – and consequently in child passenger protection in rideshare – over child restraint systems available in the U.S. One of those identified was the multifunctional Trunki boost-a-pak. The group felt that increased availability of such devices in the U.S. could be an effective means for increasing child restraint use in rideshare. The group suggested that an analysis be conducted of the extent to which Federal Motor Vehicle Safety Standards (FMVSS) prevent the sale of portable child restraint products in the U.S. and some consideration being given to accommodating and promoting their use if this is feasible without compromising safety. The group identified a need to generate new knowledge in this area through further research and international collaboration. Submitting abstracts or papers of the research findings of this project to the Association for the Advancement of Automotive Medicine Special Interest Group on child occupant safety, The Transportation Research Board’s Annual Meeting, and the Protection of Children and Cars Conference was recommended.

### **Task 7: Identify objective techniques to measure the use of CRS in for-hire motor vehicles**

The group interpreted “objective techniques” to mean methods that will minimize measurement bias. The strengths and limits of self-reported, observational and video-recordings of CRS use in for-hire vehicles were discussed.

Self-reported surveys are prone to sampling bias, social desirability bias and recall bias. Recognizing these limitations, survey data collected periodically on CRS use in ridesharing and taxi vehicles in a nationally representative sample with appropriate sampling weights could inform understanding of factors and trends related to use and non-use of CRS, particularly if the survey probed barriers and facilitators that underly behavior choices.

Roadside observation of CRS use in ridesharing and taxi vehicles may also be prone to sampling bias if site selection is not carefully considered. For example, observing CRS use only in airport or hotel pickup areas for rideshare and taxi services may be biased toward higher income families and limit generalizability to “non-vacation” travel scenarios. Using the approach developed for the 2019 National Survey of the Use of Booster Seats may be one way to conduct sampling in a rigorous way.<sup>13</sup>

Unlike a regular observational study of restraint use, a survey of rideshare would require attention to identifying ridesharing vehicles, perhaps by looking for identifying marks (e.g., logos for Uber or Lyft) on the vehicle. However, these logos are not universally used, so a certain proportion of ridesharing trips are likely to be missed.

Video data from in-vehicle video recorders could be another approach to collecting objective data on the use of CRS in for-hire vehicles. The use of cameras in rideshare vehicles is not uncommon (e.g., to monitor passenger behavior). There may be a self-selection bias for drivers who are willing to participate in a program that collects video data, and this could limit the generalizability of the findings. A naturalistic study of ridesharing and taxi drivers could be one approach to collecting objective data about CRS use in these vehicles. Any approach to collecting data in for-hire vehicles would also need to comply with Institutional Review Board requirements and consider issues such as passenger consent and privacy.

### **Task 9 and 10: (9) Develop targeted behavior change strategies to promote child passenger safety and (10) Propose strategies to evaluate the guidance**

A three-pronged approach to promote child safety in for-hire vehicles was suggested by the group:

1. Education of parents and caregivers: Parents and caregivers need to be reminded of the injury risks of traveling with children who are not appropriately restrained, even on short trips, when not in their personal vehicle. In addition, they should be provided with the knowledge and tools to make informed decisions about the appropriate seats for different situations.
2. Child seat integration directly into vehicles: In the current market, there are few cars that have an integrated child seat and there seems to be little innovation in this area. Stimulating consumer interest could generate market demand for this feature, and vehicle manufacturers could be encouraged or incentivized to produce vehicles with integrated child safety seats, as was the case with automatic emergency braking.
3. Travel friendly child restraint systems by car seat manufacturers: While there are technical challenges in designing a compliant car seat that is also portable, there may be potential for compliant designs for certain weight/size ranges. Such designs may lack the utility of seats that can accommodate a wide range of weights and sizes, but their convenience could increase use in rideshare. Increased consumer demand for such seats could motivate manufacturers to invest in their development.

The group discussed whether a harm reduction approach might be appropriate to increase child safety in for-hire vehicles. In general, children should be restrained according to best practices, but could this standard be amended to accommodate the context of for-hire vehicles? For example, a three-year-old child should not use a backless booster according to best practices but considering that the alternative is likely to be no CRS use, this might be appropriate for

ridesharing trips. However, panelists acknowledged that there may be a danger in implicitly endorsing sub-optimal child restraint use, and this may have unintended consequences, such as sub-optimal restraint use in personal vehicles.

As part of a harm reduction approach, the group considered whether a special category within FMVSS 213 could be developed for child restraint systems for use in rideshare. While intriguing from a harm reduction perspective, this approach is problematic in other respects and would need to be carefully studied to ensure that the safety benefit added by increased use in rideshare was not offset by decreased safety when such seats are used in place of conventional child seats in other vehicles.

Evaluation of these approaches would need to be ongoing, using objective observation of CRS use in for-hire vehicles and market scans to see if new products are being introduced and disseminated to enhance child safety, either by vehicle manufacturers or by restraint manufacturers.

#### **Task 8: Describe the roles of stakeholders who can influence the use of CRS**

The group identified a range of stakeholders who can influence the use of CRS in for-hire vehicles:

Ridesharing corporations: There is a need to explore the limits of rideshare corporation collaboration on this safety problem and find ways to improve the safety of children without hurting the economic situation of the drivers. Rideshare corporations should share responsibility for protection of child passengers rather than placing the onus on drivers or parents.

State highway safety offices may consider advocating for further rideshare corporation collaboration specifically on the protection of child passengers in their vehicles. Strategies need to be identified to engage corporate responsibility on this issue. This could include a pilot where state or city legislation requires rideshare corporations to provide and sanitize appropriate CRS for all vehicles, alongside appropriate training for drivers.

The “Uber Car Seat” currently advertised on Uber’s website provides riders in New York City (NYC) with a forward-facing car seat for a child who is at least 2 years old, 22 pounds, and 31 inches tall for a \$10 surcharge. Uber drivers in NYC had been trained to install the IMMI Go but this program was discontinued. The seat options available for the Uber Car Seat program is currently unknown.

Corporations could be required to provide appropriate affordable child restraint devices in a designated portion of their vehicles free of charge as a requirement to receive a permit to operate in a city or state. This type of arrangement already exists with micro-mobility companies where a certain number of electric scooters are required to be distributed in neighborhoods which are identified as mobility deserts in a city, to receive permission to operate in more profitable sections of the city.

Rideshare and taxi drivers: With corporate support and financial incentives, drivers could be encouraged to install appropriate CRS systems in their vehicle. This could enable them to offer affordable, specialized rideshare services for parents with younger kids, which the parent would request when hailing the vehicle.

Pediatricians, other health professionals and child passenger safety technicians: Health and safety professionals who interact with parents and caregivers could provide guidance and education on best practices for child safety in for-hire vehicles. The expert group was not aware of any outreach to these groups on this issue. Professional Associations such as the American Academy of Pediatricians that produce TIP sheets for professional education could add a section to their written TIP guidance documents aimed at educating other practicing pediatricians and professionals on traveling with infants and children in ride share vehicles.

Safety and Consumer Advocacy Groups: Organizations such as Advocates for Highway and Auto Safety, the Insurance Institute for Highway Safety and Consumer Reports could be involved in advocacy efforts to encourage ridesharing corporations to share responsibility for child passenger safety and to disseminate information to parents and caregivers.

Travel industry: Airlines, travel agents and hotels routinely provide information to travelers about their destination. This could include information about child restraint laws in the state or city destination and ways to travel safely with children.

Department of Transportation. Funding opportunities or other incentives could be explored to stimulate manufacturers to conduct product development that may be in the public interest but not otherwise profitable. One example could be portable or lightweight child seats that would be very convenient for rideshare users but may be unprofitable for manufacturers. The current lack of convenient products contributes to the rationale for child passenger safety law exemptions for vehicles for hire. Consumer information programs – such as the New Car Assessment Program – could be used to recognize innovation and stimulate development and marketing of practical travel versions of child safety seats.



## APPENDIX D: Electronic Presentation of the Guidance

Slide 1



A Guide for Identifying  
and Prioritizing  
Behavioral Interventions  
to Improve Child Safety  
in For-Hire Vehicles

Prepared as part of BTS-11

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## Project Background

- Increase in use of ridesharing services.
- Research indicates that use of child restraint systems (CRS) in taxis and rideshare vehicles is lower than it is in personal motor vehicles.
- CRS are crucial to protecting children from crashes.



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- Rideshare services provided by companies like Uber and Lyft have become much more popular over the last decade. In Q4 2021, Uber reported an average of 19.5 million trips a day worldwide<sup>1</sup>, and Lyft reported 18.7 million active riders (defined as riders who take at least one trip during the quarter).<sup>2</sup>
- Evidence of the prevalence of children in rideshare was found in a 2019 survey conducted by members of the research team.<sup>3</sup> This study, based on a nationally representative sample, reported that more than two-thirds (68%) of parents of children below 10 years of age had used rideshare, and that 82% of these parents had used rideshare with their children. As personal vehicles become less desirable and common among urban residents,<sup>4</sup> rideshare and taxi services will likely continue to become more popular.
- Since CRS are a crucial tool in decreasing the risk of crash injury for children,<sup>8</sup> it is prudent to ensure that advances in personal mobility in the U.S. are not accompanied by setbacks in child safety.
- NHTSA estimates that CRS are 71 percent effective in preventing car crash death for infants (under one year old) and 54 percent effective for toddlers (one to four years old) in passenger cars.<sup>9</sup> From 1975 to 2017, more than 11,000 children aged five years old and younger are estimated to have had their lives saved by restraints (CRS or adult seat belts).
- While restraint use for children age four and under is greater than 90%, a 2021 NHTSA report estimated that an additional 46 lives in this age group could be saved annually if CRS use was 100%.<sup>10</sup> Evidence indicates that increasing the CRS usage rate to this level will require special attention to child seat use in rideshare and taxis.

## Purpose of This Guide

To help safety advocates identify the types of behavioral interventions that can be taken to effectively boost CRS use in for-hire vehicles.

## Evidence-Based Expert Recommendations

The strategies outlined in this guide were informed by:

- Document reviews
- Surveys of parents and caregivers
- Surveys of taxi and rideshare drivers
- Meetings to gather expert opinion from a highly qualified Advisory Group



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## Recommended Interventions

1

Strengthening CRS requirements that apply to for-hire vehicles

2

Encouraging for-hire companies to play a more active role in ensuring child passenger protection

3

Introducing legislation to require for-hire companies to provide CRS in their vehicles or facilitate CRS use



## Strengthening CRS requirements that apply to for-hire vehicles

## Existing State CRS Policies

- CRS use is required in personal vehicles by all 50 states.
- Seven states exempt rideshare vehicles from their CRS requirement, and 28 states exempt taxis.
- Most penalties include fines ranging from \$10-500 and points added to the driver's license.
- Who is responsible for compliance? Of the states requiring CRS use in rideshare/taxi:
  - 84% of states specify that the driver is responsible.
  - 9% place responsibility on the parent.
  - 7% do not specify who is responsible.



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- All 50 states have policies that require the use of CRS for children under a certain age, weight, or height in personal vehicles.
- Seven states (14%) exempt rideshare vehicles from the CRS requirement (HI, ID, IN, MD, NH, TX, WA) and have policies that contain a broad exemption for “commercial” or “for-hire” vehicles, defining that term to include both rideshare and taxis.
- In the remaining 43 states, child passengers in rideshare vehicles are required to be secured in an appropriate CRS.
- Every state policy describes penalties for failure to comply with CRS requirements. These penalties generally include monetary fines and/or driver's license points. The fines vary, depending on the state, type of CRS, and other circumstances, with a minimum of \$10 and a maximum of \$500.
- In personal vehicles, the driver is generally responsible for traffic and safety violations, but when children are riding in rideshare or taxi vehicles, the responsibility may shift.
- Of the 43 states that require CRS in rideshare and/or taxis, 36 (84%) place responsibility on the driver.
- Four states (9%) (CA, CO, IA, FL) hold the parent or guardian responsible, though California and Colorado note that this is only true if the parent or guardian is in the vehicle with the child.
- In three states (7%) (MT, ND, OR), the legal responsibility for CRS violations in this context is somewhat ambiguous or unclear. In these cases, it is likely that the driver is responsible.

## Existing City CRS Policies

- The research team reviewed the 50 largest cities in the U.S.; only 12 cities had relevant CRS laws or ordinances.
- Many cities defer to their state's CRS requirements.
- Of the 12 cities with relevant CRS laws:
  - 67% require CRS in rideshare vehicles but not in taxis.
  - 17% require CRS use in both rideshare and taxi vehicles.
  - Louisville requires CRS use in taxis, but rideshare vehicles are not mentioned.
  - Chicago's requirement does not specifically address for-hire vehicles.



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- The research team also conducted a review of the 50 largest cities in the United States. Of the 50 cities included in this study, just 12 cities had relevant laws or ordinances.
- The fact that no relevant policies appeared during a search in the municipal code of the remaining 38 cities does not mean that CRS use is not required or that taxis or rideshare vehicles are unregulated. Rather, in those cases, localities have either chosen not to legislate on top of state requirements or are prevented from doing so.
- Of the 12 cities with relevant policies, 8 (67%) require CRS in rideshare vehicles, but not taxis.
- Two cities (17%) (Raleigh, NC and Seattle, WA) require CRS use in both rideshare vehicles and taxis.
- In one city (Louisville, KY), there is an explicit requirement for taxis, but no specific language for rideshare vehicles.
- Finally, in one city (Chicago, IL), the law does not indicate any specific requirements or exceptions for rideshare or taxis.
- Importantly, these laws generally reiterate state law.



## Legislative Options

- Amend existing state and city legislation to eliminate CRS requirement exemptions for rideshare and taxi vehicles.
- Clarity is needed about the roles and responsibilities of parents/caregivers, drivers, and for-hire companies about the provision, and installation of appropriate restraints for child passengers.



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- As evident from prior slides, a substantial amount of state and city governments exempt rideshare and taxi vehicles from their CRS requirements. One step to boost CRS use in for-hire vehicles would be to eliminate these exemptions through amendments to existing state and city legislation. Laws that currently do not exempt rideshare vehicles but do exempt taxis should be amended to ensure that taxis are included in the requirement. Once these exemptions are eliminated, governments should also move to encourage compliance in an effective but equitable manner.
- There is a need for clarity about the roles of parents/caregivers, drivers, and companies about who provides and installs the appropriate restraints for children.

## Legislative Options (cont.)

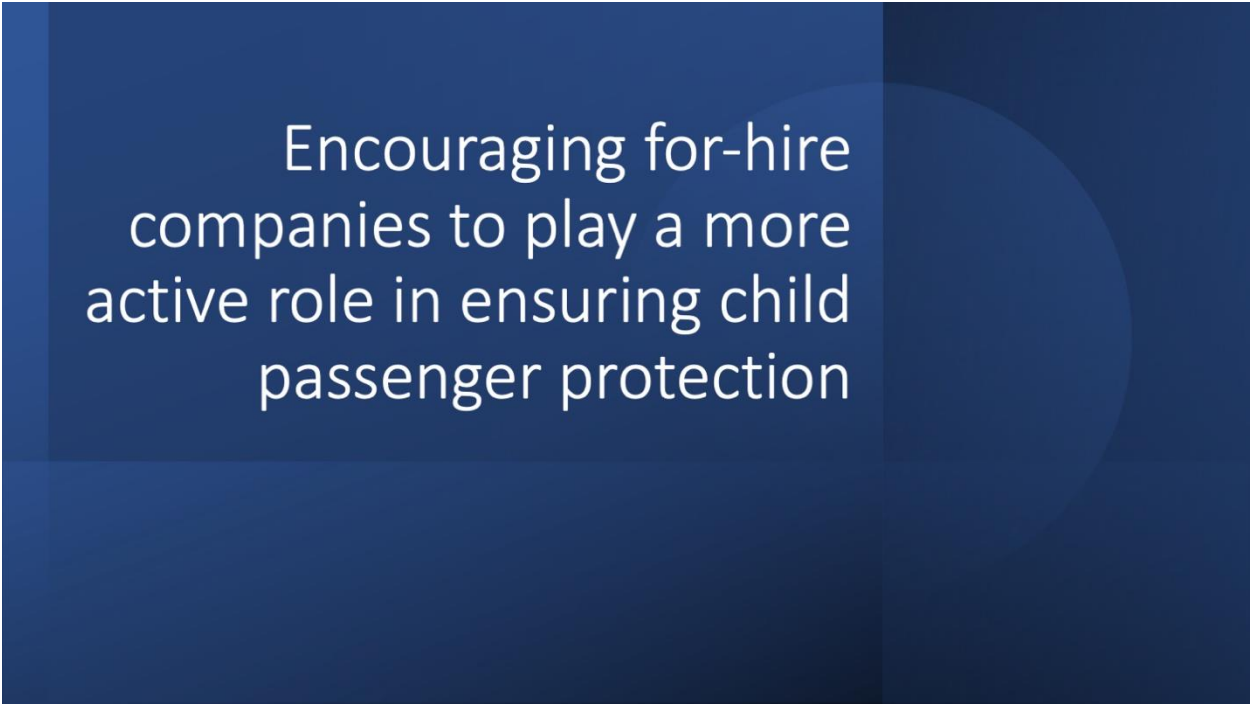
- Monetary fines are already used by most state and city governments for CRS violations.
- Fines have been shown to exacerbate inequities, so income-based fines could be explored as a more equitable alternative.
- The fine assigned for a CRS violation could be waived or reduced if the violator obtains a CRS and provides proof within a specified time frame.
  - This turns the deterrent (a monetary fine) into something that motivates the violator to take corrective action and begin using a CRS with their child.
  - Additionally, this option could help reduce the inequities associated with monetary fines.



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- Most state and city governments provide a fine for violations of their CRS requirements. Government-imposed fines are known to have a disproportionate impact on low-income people, and have been shown to exacerbate existing inequities,<sup>11</sup> however, when compared to alternative penalties (e.g., incarceration, mandatory community service), fines may be a more appropriate penalty for violating CRS requirements. Income-based fines, which are automatically adjusted in proportion to the violator's annual income, appear to be a more equitable option and have been implemented in other countries.<sup>12</sup> However, income-based fines have been tried in the U.S. only a few times, and it would require considerable political capital to revive such a system.<sup>13,14</sup>
- Many state CRS policies include a stipulation that the fine assigned for a CRS violation could be waived or reduced if the violator obtains a CRS and provides proof to the court within a specified time frame (e.g., 30 days from the date of the violation). The research team believes this is a valuable feature to be included in CRS legislation, as it turns the deterrent (a monetary fine) into something that motivates the violator to take immediate corrective action and begin using a CRS with their child. Additionally, this option could help reduce the inequities associated with monetary fines for low-income violators.



Encouraging for-hire  
companies to play a more  
active role in ensuring child  
passenger protection

## Current Company Involvement

- For-hire companies currently offer inconsistent guidance or support to their drivers regarding CRS use in their vehicles.
- Findings from surveys of rideshare and taxi drivers indicate that over a third of drivers have not received any guidance from their company.
- Many drivers are forced to navigate these challenges alone.



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- Rideshare and taxi companies currently offer inconsistent guidance or support to their drivers on the issue of CRS use in their vehicles.
- As part of the BTS-11 project, the research team conducted a national survey of 291 rideshare and taxi drivers. When asked about guidance from their company, just over a third of drivers who responded to this question said that they received no guidance from their company, and 31% indicated their company had told them that passengers are responsible for providing CRS.
- As a result of this lack of guidance, many for-hire drivers are forced to navigate these challenges alone.

## Proposed Company Outreach

- Establishing a dialogue with for-hire companies could help boost CRS use in for-hire vehicles.
- Companies can be encouraged to:
  - Provide CRS to their drivers.
  - Facilitate quick access when drivers need a CRS.
  - Help distribute educational campaigns to parents and drivers.
  - Work with community leaders to propose additional ways to increase CRS use.



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- Establishing a dialogue between state and local highway safety offices and these for-hire companies could be a valuable step toward boosting CRS use in for-hire vehicles.
- Companies which agree to discuss their role in ensuring child passenger safety can be encouraged to:
  - Provide CRS to their drivers
  - Reduce or eliminate barriers to CRS use in their vehicles
  - Help develop and distribute educational campaigns for parents and drivers
  - Work with community leaders to propose additional ways to increase CRS usage in their vehicles.
- If a company is sufficiently engaged in addressing this issue, a valuable long-term partnership could be created between the company and the state or local government.

## Example Talking Points for Safety Advocates

- CRS use is important because CRS are effective at protecting children in crashes.
- Highway safety efforts have been focused on CRS use in private vehicles, but with increase in rideshare use, it is now important to consider for-hire vehicles.
- Would your company be interested in working with us on an education campaign for parents who are using your for-hire services?



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- Our state/local highway safety office promotes child passenger protection because CRS are incredibly effective at preventing death for children in crashes.
- Over the years, our office has conducted a variety of education and policy activities to protect children riding in private motor vehicles. We are now seeing an increase in the use of rideshare among families with young children. Would you be interested in working with us on an education campaign for parents who are using your for-hire services? This education campaign could include:
  - Messages on your app to remind parents to bring a CRS with them.
  - Messages on your app which give parents advice on the kind of CRS that is right for their child (depending on the child's age, weight, and height).
  - Messages displayed in for-hire vehicles which point out the availability of CRS that are marketed as being portable.

## Example Talking Points for Safety Advocates (cont.)

- Could our office work with your corporation to provide training for correct installation of child seats for your drivers?
- Would your corporation like to work with our office to establish a program that makes CRS more available to for-hire drivers?



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- Could our office work with your corporation to provide training for correct installation of child seats for your drivers?
- Would your corporation like to work with our office to establish a program that makes CRS more available to for-hire drivers? This program could include:
  - Purchasing CRS in bulk and distributing them to for-hire drivers.
  - Subsidizing the purchase of CRS by for-hire drivers through rebates or discounts.
  - Establishing CRS pickup/drop-off stations that could be used by for-hire drivers. These stations would enable drivers to pick up CRS when needed for a trip and drop the CRS off at the station when the CRS is no longer needed, saving on car storage space. These stations could also offer CRS sanitation services to ensure the CRS are clean and ready for use by passengers.



Legislation to require for-hire companies to provide CRS in their vehicles or facilitate CRS use



## When Advocacy is Ineffective

- State and local leaders can introduce legislation that requires action from for-hire companies:
  - Provide CRS to their drivers.
  - Eliminate/reduce barriers to CRS use.
- As similar legislation is not known to exist in the U.S., legislation should be drafted and implemented thoughtfully.



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- When efforts to engage rideshare and taxi companies through advocacy work are insufficient, state and local leaders have the option to introduce legislation which requires these companies to take meaningful steps toward ensuring access to CRS in their vehicles.
- This legislation can require the company to provide CRS to their drivers or reduce/eliminate barriers to CRS use in their vehicles.
- As similar legislation is not known to exist in the U.S., care should be taken to ensure that any enacted policies have been thoroughly reviewed by all affected stakeholders to prevent any unintended adverse effects.

## When Advocacy is Ineffective (cont.)

- State and local governments regulate many aspects of rideshare and taxi companies and vehicles.
  - Required permits for rideshare companies.
  - Regulations for taxi meters, markings, and payment options.
  - Equitable access to e-scooters.
- Lawmakers can look to these policies for guidance as they craft new CRS policies.



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- States and local governments have requirements for rideshare and taxi companies and vehicles. Rideshare companies typically need to acquire a permit to operate.<sup>15</sup> A state or locality issues permits to rideshare companies that meet certain criteria. These requirements may include driver requirements, insurance requirements, privacy requirements, vehicle requirements and others.<sup>16</sup> Taxi vehicles are often required to have certain markings, meters, and payment systems.<sup>17</sup> These requirements are commonplace and could be used as a model for states and localities seeking to adopt policies that require companies to provide or facilitate access to CRS.
- Some analogous government policies seek to establish and protect equitable access to transportation services. Baltimore City, for example, has a series of rules for dockless vehicles (e.g., scooters or e-bikes) that seek to establish equitable access and use. These standards include low-income, cash, and non-smartphone plans and specifically note that pricing cannot be based on any of a series of factors including race, gender identity, age, and others.<sup>18</sup> These standards illustrate that governments may be able to enact requirements to facilitate equitable access for families with children seeking to use taxi or rideshare services.

## Sample Legislation

- Rideshare and taxi companies must provide in every vehicle used for such services, a child restraint that is compliant with FMVSS 213 and is suitable for infants and children up to at least 40 pounds.
- Rideshare companies must ensure that each vehicle includes education materials encouraging child restraint use by customers.
- Rideshare companies must ensure that drivers have received training on correct installation of child restraint devices.



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## References

1. *Uber Announces Results for Fourth Quarter and Full Year 2021.* (2022, February 9). Uber Investor. Retrieved July 11, 2022, from <https://investor.uber.com/news-events/news/press-release-details/2022/Uber-Announces-Results-for-Fourth-Quarter-and-Full-Year-2021/>
2. *Lyft Announces Solid Q4'21 and Fiscal 2021 Results.* (2022, February 8). Lyft. Retrieved July 11, 2022, from <https://investor.lyft.com/news-and-events/news/news-details/2022/Lyft-Announces-Solid-Q421-and-Fiscal-2021-Results/default.aspx>
3. Ehsani JP, Michael JP, Gielen A. Rideshare use among parents and their children. *Inj Epidemiol.* 2021;8(1):1-3. doi:10.1186/s40621-021-00302-4
4. Polzin SE, Chu X, Godfrey J. The impact of millennials' travel behavior on future personal vehicle travel. *Energy Strategy Rev.* 2014;5:59-65. doi:10.1016/j.esr.2014.10.003
5. Owens J. Factors Surrounding Child Seat Usage in Rideshare Services.; 2019. [https://www.vtti.vt.edu/utc/safe-d/wp-content/uploads/2019/10/01-005\\_FinalResearchReport\\_Final.pdf](https://www.vtti.vt.edu/utc/safe-d/wp-content/uploads/2019/10/01-005_FinalResearchReport_Final.pdf)
6. Prince P, Hines LM, Bauer MJ, et al. Pediatric Restraint Use and Injury in New York City Taxis Compared with Other Passenger Vehicles. *Transp Res Rec.* Published online 2019:0361198119843091.
7. Li HR, Pickrell T. The 2017 National Survey of the Use of Booster Seats (Report No. DOT HS 812 617). Washington, DC: National Highway Traffic Safety Administration. National Highway Traffic Safety Administration; 2018.
8. Kahane CJ. Lives Saved by Vehicle Safety Technologies and Associated Federal Motor Vehicle Safety Standards, 1960 to 2012. National Highway Traffic Safety Administration; 2015.



## References (continued)

9. Hertz E. Revised Estimates of Child Restraint Effectiveness. National Highway Traffic Safety Administration; 1996.
10. Enriquez J. The 2019 National Survey of the Use of Booster Seats. National Highway Traffic Safety Administration; 2021.
11. Harris A., Pattillo M., Sykes, B. Studying the System of Monetary Sanctions. RSF: The Russell Sage Foundation Journal of the Social Sciences. 2022;8(2):1-33. <https://doi.org/10.7758/RSF.2022.8.2.01>
12. Pinsker, J. (2015, March 12). Finland, Home of the \$103,000 Speeding Ticket. The Atlantic. <https://www.theatlantic.com/business/archive/2015/03/finland-home-of-the-103000-speeding-ticket/387484/>
13. Simpson, B. (2022, February 2). The Other Speed Trap. The Atlantic. <https://www.theatlantic.com/ideas/archive/2022/02/traffic-tickets-income-adjustment-rich/621452/>
14. Schierenbeck, A. The Constitutionality of Income-Based Fines. The University of Chicago Law Review. 2018;85(8):1869-1925.
15. Ind. Code § 8-2.1-19.1-1 (2021).
16. Ind. Code § 8-2.1-19.1-3 (2021).
17. 35 R.C.N.Y. § 58-01 et seq. (2020).
18. Baltimore, Md., Municipal Regulations § 14.02.01.05 (2022).



## APPENDIX E: Summary of Rideshare Company Practices

Company Practices Overview					
Company	Requires drivers and riders to comply with applicable passenger safety laws?	Provides CRS if the caregiver does not have one available?	If yes, what are the specifications for providing CRS?	Exceptions to CRS policies	OECD countries of operation
Uber	Yes	No, it is the rider's responsibility to provide a car seat. Drivers can also cancel the ride if they are not comfortable with the rider installing a car seat in their car or feel that the child cannot be safely transported in the seat.	N/A	New York City: Child seats available through the Uber Car Seat service for an additional \$10 fee. One forward-facing car seat is provided for a child who is at least 2 years old, 22-48 pounds, and 31-52 inches.	Uber operates in the following 30 countries: Canada, USA, Australia, New Zealand, Austria, Belgium, Czech Republic, Estonia, Finland, France, Germany, Greece, Ireland, Israel, Italy, Lithuania, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, Chile, Mexico, Japan, Korea
Lyft	Yes	No, it is the rider's responsibility to provide a car seat.	N/A	New York City: Child seats available through the Car Seat Mode vehicle type for an additional \$10 fee. One forward-facing car seat is provided for a child who is at least 2 years old, 22-48 pounds, and 31-52 inches.	Lyft operates in the following 2 countries: Canada, USA
Ola	Yes	Not indicated.	N/A	None indicated.	Ola operates in the following 3 countries: Australia, New Zealand, United Kingdom
DiDi	Yes	Not indicated.	N/A	None indicated.	DiDi operates in the following country: Australia
Bolt	Yes	No, it is the rider's responsibility to provide a car seat.	N/A	None indicated.	Bolt operates in the following 9 countries: Austria, Czech Republic, Estonia, France, Hungary, Latvia, Lithuania, Mexico, Poland
Carmel	Yes	No, it is the rider's responsibility to provide a car seat.	N/A	None indicated.	Carmel operates in the following 24 countries: Austria, Belgium, Chile, Colombia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Sweden, Switzerland, Turkey, United Kingdom

### Company Practices Overview

Company	Requires drivers and riders to comply with applicable passenger safety laws?	Provides CRS if the caregiver does not have one available?	If yes, what are the specifications for providing CRS?	Exceptions to CRS policies	OECD countries of operation
<b>BlaBlaCar</b>	Yes	Not indicated.	N/A	None indicated.	BlaBlaCar operates in the following 14 countries: Belgium, Czech Republic, France, Germany, Hungary, Ireland, Italy, Mexico, Netherlands, Poland, Slovak Republic, Spain, Turkey, United Kingdom
<b>Yango</b>	Not indicated	Not indicated.	N/A	None indicated.	Yango operates in the following 5 countries: Estonia, Finland, Israel, Latvia, Lithuania
<b>Cabify</b>	Yes	Yes.	<p>Four different child seats available depending on the child's size and weight (groups 0, 1, 2 and 3). These must be requested in the message to the driver. If a child seat is requested for an immediate journey, then it is not guaranteed that the vehicle will have the child seat needed.</p> <p>The first child seat is free in most countries, and there will be a cost for each additional seat. To request more than one child seat, the request must be made at least 6 hours in advance, up to a maximum of 3 seats per journey.</p>	<p>Colombia: Child seats not available.</p> <p>Spain: Group 1-3 child seats available only through the Cabify Kids service for an additional 2€ fee.</p>	Cabify operates in the following 4 countries: Chile, Mexico, Colombia, Spain

## **APPENDIX F: Summary of State Child Restraint Policies**

This material can be found in a separate PDF document titled “State CRS Policies Summary.”



## **APPENDIX G: Summary of City Child Restraint Policies**

This material can be found in a separate PDF document titled “City CRS Policies Summary.”

## **APPENDIX H: Parent/Caregiver Survey Instrument**

CS1.

Are you the parent of a child age 12 and younger?

CAWI RESPONSE OPTIONS:

1. Yes
2. No

DISPLAY\_CHILD.

The next set of questions is about child passenger safety.

C1.

How old is your youngest child?

[NUMBOX RANGE 0-12] Years

[NUMBOX RANGE 0-12] Months

C2.

How many vehicles, for example a car, truck, van or SUV, are owned, leased, or available for regular use by the people in your household?

[NUMBOX RANGE 0-20]

YOUNG.

For the next few questions, think about all the places you normally travel with your youngest child, such as to and from school, shopping, socializing, etc.

C3.

How often do you use each of the following to get from place to place with your youngest child?

GRID ITEMS, RANDOMIZED:

- A. Personal car, truck, van or SUV
- B. Carpooling
- C. Taxi
- D. Ride-share e.g. Uber/Lyft
- E. Walk
- F. Bicycle
- G. Public transit e.g. bus or metro

RESPONSE OPTIONS:

1. Daily
2. A few times a week
3. A few times a month
4. A few times a year
5. Never

[SHOW IF C3D=1-4]

C4.

When using rideshare like Uber or Lyft, which types of trips do you take with your youngest child in rideshare vehicles?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Vacation/holiday
2. School/Daycare
3. Shopping
4. Social/Religious Activity/After School Activity
5. Doctor/health care visit
6. Other [TEXTBOX][ANCHOR]

[SHOW IF C4=1-6]

C4A.

How frequently do you take this type of trip using rideshare?

GRID ITEMS:

- A. [SHOW IF C4=1] Vacation/holiday
- B. [SHOW IF C4=2] School/Daycare
- C. [SHOW IF C4=3] Shopping
- D. [SHOW IF C4=4] Social/Religious Activity/After School Activity
- E. [SHOW IF C4=5] Doctor/health care visit
- F. [SHOW IF C4=6] [TEXTBOX RESPONSE]

RESPONSE OPTIONS:

1. Daily

2. A few times a week
3. A few times a month
4. A few times a year

[SHOW IF C3D=1-4]

C5.

Why did you use rideshares for those trips?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Didn't have access to a vehicle
2. Cheaper than other options
3. Faster than other options
4. Safer than other options
5. More convenient than other options
6. Someone else made the decision
7. Other [TEXTBOX][ANCHOR]

[SHOW IF C3C=1-4]

C6.

When using taxis, which trips do you take with your youngest child?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Vacation/holiday
2. School/Daycare
3. Shopping
4. Social/Religious Activity/After School Activity
5. Doctor/health care visit
6. Other [TEXTBOX][ANCHOR]

[SHOW IF C6=1-6]

C6A.

How frequently do you take this type of trip using taxis?

GRID ITEMS:

- A. [SHOW IF C6=1] Vacation/holiday travel
- B. [SHOW IF C6=2] School/Daycare
- C. [SHOW IF C6=3] Shopping
- D. [SHOW IF C6=4] Social/Religious Activity/After School Activity
- E. [SHOW IF C6=5] Doctor/health care visit
- F. [SHOW IF C6=6] [TEXTBOX RESPONSE]

RESPONSE OPTIONS:

- 1. Daily
- 2. A few times a week
- 3. A few times a month
- 4. A few times a year

[SHOW IF C3C=1-4]

C7.

Why did you use taxis for those trips?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

- 1. Didn't have access to a vehicle
- 2. Cheaper than other options
- 3. Faster than other options
- 4. Safer than other options
- 5. More convenient than other options
- 6. Someone else made the decision
- 7. Other [TEXTBOX][ANCHOR]

SEATBELT.

The next series of questions are about seat belt use.

C8.

How often do you use a seat belt when you drive or ride in the *front* seat of a car, truck, van or SUV?

RESPONSE OPTIONS:

- 1. Always

2. Nearly always
3. Sometimes
4. Seldom
5. Never
6. I don't drive or ride in a car

C9.

How often do you use a seat belt when you ride in the *back* seat of a car, truck, van or SUV?

RESPONSE OPTIONS:

1. Always
2. Nearly always
3. Sometimes
4. Seldom
5. Never
6. I don't drive or ride in a car

[SHOW IF C3A=1-4]

C10.

How does your youngest child usually ride in your car, truck, van or SUV?

RESPONSE OPTIONS, RANDOMIZED:

1. In a car seat
2. In a booster seat
3. In a seat belt
4. Not in a seatbelt e.g. held on someone's lap
5. None of the above [ANCHOR]

[SHOW IF C3A=1-4]

C10A.

What factors influenced your decision for how your youngest child usually rides in your car, truck, van or SUV?

*Select all that apply.*

RESPONSE OPTIONS:

1. Safest option

2. Most convenient option
3. Only option available
4. Following the law
5. Someone else made the decision
6. Other [TEXTBOX]

[SHOW IF C10=4,5]

C10B.

What are the barriers to using a child seat, booster, or seatbelt in your car, truck, van or SUV)?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. I don't have a child seat, booster or seat belt
2. Child refuses to stay in child seat, booster or seat belt
3. I don't want my child to use a child seat, booster or seat belt
4. Other [TEXTBOX][ANCHOR]

[SHOW IF C3D=1-4]

C11.

How often do you use a seat belt when you ride in the *front seat* of a ridesharing vehicle?

RESPONSE OPTIONS:

1. Always
2. Nearly always
3. Sometimes
4. Seldom
5. Never

[SHOW IF C3D=1-4]

C12.

How often do you use a seat belt when you ride in the *back seat* of a ridesharing vehicle?

RESPONSE OPTIONS:

1. Always
2. Nearly always
3. Sometimes

4. Seldom
5. Never

[SHOW IF C3D=1-4]

C13.

How does your youngest child usually ride in rideshare vehicles (e.g., Uber, Lyft)?

RESPONSE OPTIONS, RANDOMIZED:

1. In a car seat
2. In a booster seat
3. In a seat belt
4. Not in a seat belt e.g. held on someone's lap
5. None of the above [ANCHOR]

[SHOW IF C3D=1-4]

C13B.

What factors influence your decision for how your youngest child usually rides in a rideshare vehicle?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Safest option
2. Most convenient option
3. Only option available
4. Following the law
5. Someone else made the decision
6. Other [TEXTBOX]

[SHOW IF C13=4,5]

C13C.

What are the barriers to using a child seat, booster, or seatbelt in a rideshare vehicle?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. I don't have a child seat, booster or seat belt



2. Child refuses to stay in child seat, booster or seat belt
3. Inconvenient to travel with a child seat or booster
4. I don't want my child to use a child seat, booster or seat belt
5. Other [TEXTBOX][ANCHOR]

[SHOW IF C3C=1-4]

C14.

How often do you use a seat belt when you ride in the *front seat* of a taxi?

RESPONSE OPTIONS:

1. Always
2. Nearly always
3. Sometimes
4. Seldom
5. Never

[SHOW IF C3C=1-4]

C15.

How often do you use a seat belt when you ride in the *back seat* of a taxi?

RESPONSE OPTIONS:

1. Always
2. Nearly always
3. Sometimes
4. Seldom
5. Never

[SHOW IF C3C=1-4]

C16.

How does your youngest child usually travel in taxis?

RESPONSE OPTIONS, RANDOMIZED:

1. In a car seat
2. In a booster seat
3. In a seat belt
4. Held on someone's lap
5. None of the above [ANCHOR]

[SHOW IF C3C=1-4]

C16B.

What factors influence your decision for how your youngest child usually rides in a taxi?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Safest option
2. Most convenient option
3. Only option available
4. Following the law
5. Someone else made the decision
6. Other [TEXTBOX] [ANCHOR]

[SHOW IF C16=4,5]

C16C.

What are the barriers to using a child seat, booster, or seatbelt in a taxi?

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. I don't have a child seat, booster or seat belt
2. Child refuses to stay in child seat, booster or seat belt
3. Inconvenient to travel with a child seat or booster
4. I don't want my child to use a child seat, booster or seat belt
5. Other [TEXTBOX][ANCHOR]

[SHOW IF C3D=1-4]

C17.

When was the last time you used ridesharing with your child?

RESPONSE OPTIONS:

1. Less than 1 month ago
2. 1 – 3 months ago
3. 4 – 6 months ago
4. 7 – 12 months ago
5. 13 – 18 months ago

6. 19 – 24 months ago
7. More than 2 years ago

[SHOW IF C3C=1-4]

C18.

When was the last time you used a taxi with your child?

RESPONSE OPTIONS:

1. Less than 1 month ago
2. 1 – 3 months ago
3. 4 – 6 months ago
4. 7 – 12 months ago
5. 13 – 18 months ago
6. 19 – 24 months ago
7. More than 2 years ago

[SHOW IF C3D=1-4]

C19.

How has the COVID-19 pandemic influenced the frequency of your use of ridesharing with your child?

RESPONSE OPTIONS:

1. No change
2. Increased use of ridesharing
3. Decreased use of ridesharing

[SHOW IF C3C=1-4]

C20.

How has the COVID-19 pandemic influenced the frequency of your use of taxis with your child?

RESPONSE OPTIONS:

1. No change
2. Increased use of taxis
3. Decreased use of taxis

C21.

Where you live, are children required to be in a car seat or booster seat when riding in a Car, truck, van or SUV?

RESPONSE OPTIONS:

1. Yes
2. No
77. Don't know

C22.

Where you live, are children required to be in a car seat or booster seat when riding in a rideshare like Uber or Lyft?

RESPONSE OPTIONS:

1. Yes
2. No
77. Don't know

C23.

Where you live, are children required to be in a car seat or booster seat when riding in a taxi (not a rideshare like Uber or Lyft)?

RESPONSE OPTIONS:

1. Yes
2. No
77. Don't know

C24.

Where you live, is there a penalty or monetary fine for the parent/caregiver or the driver if a child is not in a car seat or booster seat when riding in a rideshare (like Uber or Lyft)?

RESPONSE OPTIONS:

1. Yes, there is a penalty or monetary fine for the parent/caregiver
2. Yes, there is a penalty or monetary fine for the driver
3. Yes, there is a penalty or monetary fine for both the parent/caregiver and the driver
4. No

77. Don't know

C25.

Where you live, is there a penalty or monetary fine for the parent/caregiver or the driver if a child is not in a car seat or booster seat when riding in a taxi?

RESPONSE OPTIONS:

1. Yes, there is a penalty or monetary fine for the parent/caregiver
2. Yes, there is a penalty or monetary fine for the driver
3. Yes, there is a penalty or monetary fine for both the parent/caregiver and the driver
4. No
77. Don't know

C26.

When you're travelling to another state, how often do you look up the laws relevant to child safety in that state?

RESPONSE OPTIONS:

1. Always
2. Nearly always
3. Sometimes
4. Seldom
5. Never
6. I don't travel to other states

C27.

Who do you think should be responsible for providing a car seat or booster seat in a rideshare?

RESPONSE OPTIONS, RANDOMIZED:

1. The rideshare company should provide the car seat or booster seat
2. The parent or caregiver should provide the car seat or booster seat
3. No opinion [ANCHOR]
4. Other [TEXTBOX] [ANCHOR]

C28.

Who do you think should be responsible for providing a car seat or booster seat in a taxi?

RESPONSE OPTIONS, RANDOMIZED:

1. The taxi company should provide the car seat or booster seat
2. The parent or guardian should provide the car seat or booster seat
3. No opinion [ANCHOR]
4. Other [TEXTBOX] [ANCHOR]

C29.

Please rate your level of agreement with the following statements, where '1' represents strong disagreement and '10' represents strong agreement:

GRID ITEMS, RANDOMIZED:

- A. People expect me to use a car seat or booster seat for my child
- B. Important people in my life expect me to use a car seat or booster seat for my child
- C. Most people would understand if I didn't use a car seat or booster seat for my child
- D. I don't want people to see me riding with my child without using a car seat or booster seat
- E. I would use a car seat or booster seat for my child because I am someone who follows laws

RESPONSE OPTIONS:

1. 1 – Strongly Disagree
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10 – Strongly Agree

C30.

Please rate your level of agreement with the following statements, where '1' represents strong disagreement and '10' represents strong agreement:

GRID ITEMS, RANDOMIZED:

- A. The risk of being in a crash during an individual rideshare or taxi trip is low
- B. Carrying a car seat or booster seat for an individual rideshare or taxi trip is inconvenient
- C. Parents/caregivers who use a car seat or booster seat for their child for an individual rideshare or taxi trip are being responsible
- D. Parents/caregivers who do not use a car seat or booster seat for their child during an individual rideshare or taxi trip are being practical
- E. Installing and uninstalling a car seat or booster seat for an individual rideshare or taxi trip is a hassle

RESPONSE OPTIONS:

- 1. 1 – Strongly Disagree
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. 8
- 9. 9
- 10. 10 – Strongly Agree

C31.

How many times has a rideshare driver *crashed* while you were riding in a ridesharing vehicle with your child?

[DROPDOWN VALUES: 0,1,2,3,4 or more]

[SHOW IF C31= 2,3,4,5]

C31A.

[IF C31=3,4,5] For the first crash you were involved in, please describe the circumstance(s):

[IF C31=2] For the crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

- 1. Another car hit us from behind.
- 2. We hit another car from behind.
- 3. Another car ran a stop sign or red light and hit us.
- 4. We ran a stop sign or red light and hit another car.
- 5. Another car sideswiped us.

6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C31= 2,3,4,5]

C31B.

[IF C31=3,4,5] For the first crash you were involved in, what type of injuries resulted from the crash?

[IF C31=2] For the crash you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C31= 3,4,5]

C31C.

For the second crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.
5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C31= 3,4,5]

C31D.

For the second crash you were involved in, what type of injuries resulted from the crash?



RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C31= 4,5]

C31E.

For the third crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.
5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C31= 4,5]

C31F.

For the third crash you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C31= 5]

C31G.

For the fourth crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.
5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C31= 5]

C31H.

For the fourth crash you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

C32.

How many times has a rideshare driver *almost* crashed while you were riding in a ridesharing vehicle with your child?

[DROPDOWN VALUES: 0,1,2,3,4 or more]

[SHOW IF C32=2,3,4,5]

C32A.

[IF C32=3,4,5] For the first incident you were involved in, please describe the circumstance(s):  
[IF C32=2] For the incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C32=2,3,4,5]  
C32B.

[IF C32=3,4,5] For the first incident you were involved in, what type of injuries resulted from the crash?

[IF C32=2] For the incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C32=3,4,5]  
C32C.

For the second incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.

3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C32= 3,4,5]

C32D.

For the second incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C32=4,5]

C32E.

For the third incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C32=4,5]

C32F.

For the third incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C32= 5]

C32G.

For the fourth incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C32=5]

C32H.

For the fourth incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

C33.

How many times has a taxi driver crashed while you were riding in a taxi with your child?

[DROPDOWN VALUES: 0,1,2,3,4 or more]

[SHOW IF C33=2,3,4,5]

C33A.

[IF C33=3,4,5] For the first crash you were involved in, please describe the circumstance(s):

[IF C33=2] For the crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.
5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C33=2,3,4,5]

C33B.

[IF C33=3,4,5] For the first crash you were involved in, what type of injuries resulted from the crash?

[IF C33=2] For the crash you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C33=3,4,5]

C33C.

For the second crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.
5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C33=3,4,5]

C33D.

For the second crash you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C33=4,5]

C33E.

For the third crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.

5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C33=4,5]

C33F.

For the third crash you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C33=5]

C33G.

For the fourth crash you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car hit us from behind.
2. We hit another car from behind.
3. Another car ran a stop sign or red light and hit us.
4. We ran a stop sign or red light and hit another car.
5. Another car sideswiped us.
6. We sideswiped another car.
7. We drove off the road and hit something (for example a mailbox or a tree).
8. We hit a pedestrian or a bicyclist
9. Other [TEXTBOX] [ANCHOR]

[SHOW IF C33=5]

C33H.

For the fourth crash you were involved in, what type of injuries resulted from the crash?



RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

C34.

How many times has a taxi driver almost crashed while you were riding in a taxi with your child?

[DROPDOWN VALUES: 0,1,2,3,4 or more]

[SHOW IF C34=2,3,4,5]

C34A.

[IF C34=3,4,5] For the first incident you were involved in, please describe the circumstance(s):

[IF C34=2] For the incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C34=2,3,4,5]

C34B.

[IF C34=3,4,5] For the first incident you were involved in, what type of injuries resulted from the crash?

[IF C34=2] For the incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C34=3,4,5]

C34C.

For the second incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C34=3,4,5]

C34D.

For the second incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C34=4,5]

C34E.

For the third incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.
5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C34=4,5]

C34F.

For the third incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

[SHOW IF C34=5]

C34G.

For the fourth incident you were involved in, please describe the circumstance(s):

*Select all that apply.*

RESPONSE OPTIONS, RANDOMIZED:

1. Another car almost hit us from behind.
2. We almost hit another car from behind.
3. Another car ran a stop sign or red light and almost hit us.
4. We ran a stop sign or red light and almost hit another car.

5. Another car almost sideswiped us.
6. We almost sideswiped another car.
7. We almost drove off the road and hit something (for example a mailbox or a tree).
8. We almost hit a pedestrian or a bicyclist
9. Other [TEXTBOX][ANCHOR]

[SHOW IF C34=5]

C34H.

For the fourth incident you were involved in, what type of injuries resulted from the crash?

RESPONSE OPTIONS:

1. No injuries
2. Minor scrapes and bruises
3. Injuries requiring medical attention but no overnight hospital stay
4. Injuries requiring overnight hospitalization
5. I don't recall
6. I don't know
7. Other [TEXTBOX]

## **APPENDIX I: Rideshare Driver Survey Instrument**

Thank you for agreeing to take this survey. To get the most accurate data for the survey, we need to ensure that respondents fulfill certain criteria. We will ask you four questions to ensure you are eligible to complete this survey.

### **S1. What is your age (years)?**

[Drop down menu with options ranging from 0-100]

[Display the following questions IF age  $\geq$  21]

### **S2. Have you worked as a TAXI driver in the previous 12 months?**

1. Yes
2. No

### **S3. Have you worked as a RIDESHARE driver in the previous 12 months?**

1. Yes
2. No

[Display IF Yes to question S3]

### **S4. In the past 12 months, have you ONLY driven for delivery services (e.g., Uber Eats, DoorDash)?**

1. Yes
2. No

[If respondent's age is less than 21, OR if respondent selected No to S3, OR if respondent selected Yes to S3 AND Yes to S4, do not display the remainder of survey. Respondent is ineligible]

You are now going to begin the survey. You do not have to answer all the questions and you may stop at any time. Your answers will be used to help us understand the safety behaviors of rideshare and taxi drivers.

This section of the survey is about driving your rideshare vehicle.

### **R1. Have you been a driver for longer than one month for any of the following rideshare companies in the United States? Check all that apply:**

1. Uber
2. Lyft
3. Fasten
4. Wingz
5. Zimride
6. Juno
7. Other (please describe): [Open response]

**R2. About how many hours do you spend working as a rideshare driver during a typical 7-day week? Do not include time spent driving for delivery services (e.g., Uber Eats, DoorDash).**

[Drop down menu with options ranging from 0-168]

**R3. Please select the state where you do most of your rideshare driving:**

[Drop down menu with options for all 50 states, Puerto Rico, the District of Columbia, and an option for “I do not drive in the United States”]

Some drivers complete rideshare work for more than one company. For the next few questions, please answer about the company for which you work the most hours per month.

[Only display this question if respondent selected at least one response for R1. Only display the company names that were selected in R1.]

**R4. For which ridesharing company do you work the most hours per month?**

1. Uber
2. Lyft
3. Fasten
4. Wingz
5. Zimride
6. Juno
7. Other (please describe): [open response]

**R5. Please indicate the length of time you have worked for this rideshare company:**

1. Less than 3 months
2. 3-6 months
3. 7-12 months
4. Longer than one year

**R6. How often do YOU use a seat belt when you drive as a rideshare DRIVER?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

**R7. How often do your rideshare PASSENGERS use a seat belt when they are seated in the front seat?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

**R8. How often do you request that your rideshare PASSENGERS wear seat belts in the front seat if they do not do so on their own?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

**R9. How often do you drive a rideshare PASSENGER who will not wear a seat belt in the front seat?**

1. Always
2. Almost always
3. Sometimes

4. Almost never
5. Never

**R10. How often do your rideshare PASSENGERS use a seat belt when they are seated in the back seat?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never
6. I don't know

**R11. How often do you request that your rideshare PASSENGERS wear seat belts in the back seats if they do not do so on their own?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

**R12. How often do you drive a rideshare PASSENGER who will not wear a seat belt in a back seat?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

**R13. How many rideshare trips do you complete in a typical day?**

[Drop down menu with options ranging from 1 to 100 or more]

**R14. During a typical day, how many rideshare trips include a child younger than 8 years old with a parent/guardian?**

[Drop down menu with options ranging from 0 to 100 or more]



[Display this question IF response to R14  $\geq 1$ ]

**R15. How do children younger than 8 years old most commonly travel in your rideshare vehicle?**

1. In an infant, child, or booster seat
2. In a seat belt
3. Not in a seat belt e.g., on a parent's lap
4. Other (please describe): [open response]

[Display this question IF response to R14  $\geq 1$ ]

**R16. Do you carry a child seat or booster seat in your rideshare vehicle in case a PASSENGER needs one?**

1. Yes
2. No

[Display this question IF response to R14  $\geq 1$ ]

**R17. Do you recommend that parents bring their own child seat or booster seat for their next ride?**

1. Yes
2. No

**R18. Who do you think should be responsible for providing the child seat or booster seat in a rideshare vehicle?**

1. Parent or guardian
2. Rideshare company
3. Rideshare driver (me)
4. I don't know
5. No opinion

**R19. Does your ridesharing company give you guidance about your responsibilities as a rideshare DRIVER for child seat use by your PASSENGERS? Select all that apply:**

1. The company requires that I carry a child seat or booster seat and offer it to passengers with small children
2. The company tells me to leave it to passengers to provide a child seat or booster seat if they need one
3. The company tells me to recommend that passengers bring a child seat or booster seat for future trips
4. I have not received any guidance regarding child passengers
5. Other (please describe): [open response]

The following questions ask about child seat and booster seat laws where you do your ridesharing driving.

[Display this question IF participant selected a state, Puerto Rico, or the District of Columbia for question R3.]

**R20. Does [selected state or territory] have any law requiring children under a certain age to be secured in a child seat or booster seat while riding in a rideshare vehicle?**

1. Yes
2. No
3. I don't know

[Display this question IF participant selected Yes for question R20.]

**R20a. Does [selected state or territory] have a law requiring a child younger than 8 years old to be in a child seat or booster seat when riding in a rideshare vehicle?**

1. Yes
2. No
3. I don't know

[Display this question IF participant selected Yes for question R20.]

**R20b. Does [selected state or territory] have a fine if a child younger than 8 years old is not in a child seat or booster seat when riding in a rideshare vehicle?**

1. Yes
2. No
3. I don't know

**R21. Has your rideshare company provided you with information about local child passenger safety laws where you drive?**

1. Yes
2. No

**R22. Has your rideshare company provided you with education on the need for child seats or booster seats?**

1. Yes
2. No

**R23. Has your rideshare company provided you with any training on the correct installation of child seats or booster seats?**

1. Yes
2. No

[Display this question IF respondent selected Yes to R23]

**R23a. If yes, what was the training?**

[open response]

**R24. According to your rideshare company's policy, whose responsibility is it to ensure a child younger than eight is in an appropriate child seat or booster seat?**

1. Driver
2. Passenger
3. Unsure

**R25. According to your rideshare company's policy, whose responsibility is it to ensure a child seat or booster seat is secured properly in the vehicle?**

1. Driver
2. Passenger
3. Unsure

[Randomize display order of subquestions]

**R26. Please indicate how frequently you have engaged in each of the following actions while working at your ridesharing job:**

**R26a. Driven 5-10 MPH above the speed limit**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26b. Driven more than 10 MPH above the speed limit**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26c. Driven above the speed limit because a rideshare PASSENGER pressured me to drive faster**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26d. Driven through a red light on purpose when I could have stopped safely**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26e. Used a handheld phone to send a text message or make a phone call while the rideshare vehicle is STOPPED**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26f. Used a handheld phone to send a text message or make a phone call while the rideshare vehicle is MOVING**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26g. Allowed more PASSENGERS than seat positions in my rideshare vehicle**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26h. Allowed a child to ride in the front seat**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26i. Allowed children under 8 to ride without child seats or booster seats**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26j. Helped a CHILD PASSENGER buckle up or put them in a child seat or booster seat**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26k. Offered a rideshare PASSENGER a child seat or booster seat**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26l. Driven while feeling tired or sleepy**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26m. Decided to end a driving shift early because I was too tired or sleepy**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26n. Decided to skip a driving shift because I was too tired or sleepy**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R26o. Tried to get around the limit on the number of hours I can drive in a day by switching between different ridesharing services (e.g., from Uber to Lyft)**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**R27. How many crashes have you been involved in while working at your ridesharing job (including times when you were not transporting a passenger)?**

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5

[Display this question IF respondent selected  $\geq 1$  crashes for R27]

**R27a. Please describe the first crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 2$  crashes for R27]

**R27b. Please describe the second crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 3$  crashes for R27]

**R27c. Please describe the third crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]



[Display this question IF respondent selected  $\geq 4$  crashes for R27]

**R27d. Please describe the fourth crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected 5 crashes for R27]

**R27e. Please describe the fifth crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

**R28. How many times have you ALMOST crashed while working at your ridesharing job (including when you were not transporting a passenger)?**

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5

[Display this question IF respondent selected  $\geq 1$  near-crashes for R28]

**R28a. Please describe the first near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 2$  near-crashes for R28]

**R28b. Please describe the second near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 3$  near-crashes for R28]

**R28c. Please describe the third near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 4$  near-crashes for R28]

**R28d. Please describe the fourth near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected 5 near-crashes for R28]

**R28e. Please describe the fifth near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

**R29. What time of day do you usually drive at your rideshare job? Select all that apply:**

1. Midnight - 4:00 AM
2. 4:00 AM - 8:00 AM
3. 8:00 AM - Noon
4. Noon - 4:00 PM
5. 4:00 PM - 8:00 PM
6. 8:00 PM – Midnight

**R30. How often do you drive on roads that you're not familiar with while working at your ridesharing job?**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

For this last section of the survey, please select the options that best describe you.

**D1. What is your race? Select all that apply:**

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. Some Other Race

**D2. Are you of Hispanic, Latino, or Spanish origin?**

1. Yes
2. No

**D3. Which of the following most accurately describe(s) you? Select all that apply:**

1. Male
2. Female

3. Non-binary
4. Transgender
5. Intersex
6. Prefer to self-describe: [open response]
7. Prefer not to say

**D4. Please identify your highest level of education:**

1. Some high school
2. High school degree/GED
3. Some college, no degree
4. Associate's degree
5. Bachelor's degree
6. Master's degree
7. Doctoral degree
8. Professional degree

**D5. What is your marital status?**

1. Single, never married
2. Married or domestic partnership
3. Widowed
4. Divorced
5. Separated

**D6. Do you have any children living in your household?**

1. Yes
2. No

[Display this question IF respondent selected Yes for D6]

**D6a. If yes, how old is the youngest child?**

[open response]

## **APPENDIX J: Taxi Driver Survey Instrument**

Thank you for agreeing to take this survey. To get the most accurate data for the survey, we need to ensure that respondents fulfill certain criteria. We will ask you four questions to ensure you are eligible to complete this survey.

### **S1. What is your age (years)?**

[Drop down menu with options ranging from 0-100]

[Display the following questions IF age  $\geq$  21]

### **S2. Have you worked as a TAXI driver in the previous 12 months?**

1. Yes
2. No

### **S3. Have you worked as a RIDESHARE driver in the previous 12 months?**

1. Yes
2. No

[Display IF Yes to question S3]

### **S4. In the past 12 months, have you ONLY driven for delivery services (e.g., Uber Eats, DoorDash)?**

1. Yes
2. No

[If respondent's age is less than 21, OR if respondent selected No to S2, do not display the remainder of survey. Respondent is ineligible]

You are now going to begin the survey. You do not have to answer all the questions and you may stop at any time. Your answers will be used to help us understand the safety behaviors of rideshare and taxi drivers.

This section of the survey is about driving your taxi vehicle.

### **T1. About how many hours do you spend working as a taxi driver during a typical 7-day week?**

[Drop down menu with options ranging from 0-168]

**T2. Please select the state where you do most of your taxi driving:**

[Drop down menu with options for all 50 states, Puerto Rico, the District of Columbia, and an option for “I do not drive in the United States”]

**T3. Please indicate the length of time you have worked for your current taxi company:**

- 3) Less than 3 months
- 4) 3-6 months
- 5) 7-12 months
- 6) Longer than one year

**T4. How often do YOU use a seat belt when you drive as a taxi DRIVER?**

- a) Always
- b) Almost always
- c) Sometimes
- d) Almost never
- e) Never

**T5. How often do your taxi PASSENGERS use a seat belt when they are seated in the front seat?**

- 1. Always
- 2. Almost always
- 3. Sometimes
- 4. Almost never
- 5. Never

**T6. How often do you request that your taxi PASSENGERS wear seat belts in the front seat if they do not do so on their own?**

- b) Always
- c) Almost always
- d) Sometimes
- e) Almost never
- f) Never

**T7. How often do you drive a taxi PASSENGER who will not wear a seat belt in the front seat?**

- a) Always
- b) Almost always
- c) Sometimes
- d) Almost never
- e) Never

**T8. How often do your taxi PASSENGERS use a seat belt when they are seated in the back seat?**

- g) Always
- h) Almost always
- i) Sometimes
- j) Almost never
- k) Never
- l) I don't know

**T9. How often do you request that your taxi PASSENGERS wear seat belts in the back seats if they do not do so on their own?**

- g) Always
- h) Almost always
- i) Sometimes
- j) Almost never
- k) Never



**T10. How often do you drive a taxi PASSENGER who will not wear a seat belt in a back seat?**

1. Always
2. Almost always
3. Sometimes
4. Almost never
5. Never

**T11. How many taxi trips do you complete in a typical day?**

[Drop down menu with options ranging from 1 to 100 or more]

**T12. During a typical day, how many taxi trips include a child younger than 8 years old with a parent/guardian?**

[Drop down menu with options ranging from 0 to 100 or more]

[Display this question IF response to T12  $\geq 1$ ]

**T13. How do children younger than 8 years old most commonly travel in your taxi vehicle?**

1. In an infant, child, or booster seat
2. In a seat belt
3. Not in a seat belt e.g., on a parent's lap
4. Other (please describe): [open response]

[Display this question IF response to T12  $\geq 1$ ]

**T14. Do you carry a child seat or booster seat in your taxi vehicle in case a PASSENGER needs one?**

1. Yes
2. No

[Display this question IF response to T12  $\geq$  1]

**T15. Do you recommend that parents bring their own child seat or booster seat for their next ride?**

1. Yes
2. No

**T16. Who do you think should be responsible for providing the child seat or booster seat in a taxi vehicle?**

1. Parent or guardian
2. Rideshare company
3. Rideshare driver (me)
4. I don't know
5. No opinion

**T17. Does your taxi company give you guidance about your responsibilities as a taxi DRIVER for child seat use by your PASSENGERS? Select all that apply:**

1. The company requires that I carry a child seat or booster seat and offer it to passengers with small children
2. The company tells me to leave it to passengers to provide a child seat or booster seat if they need one
3. The company tells me to recommend that passengers bring a child seat or booster seat for future trips
4. I have not received any guidance regarding child passengers
5. Other (please describe): [open response]

The following questions ask about child seat and booster seat laws where you do your taxi driving.

[Display this question IF participant selected a state, Puerto Rico, or the District of Columbia for question R3.]

**T18. Does [selected state or territory] have any law requiring children under a certain age to be secured in a child seat or booster seat while riding in a taxi vehicle?**

1. Yes
2. No
3. I don't know

[Display this question IF participant selected Yes for question T18.]

**T18a. Does [selected state or territory] have a law requiring a child younger than 8 years old to be in a child seat or booster seat when riding in a taxi vehicle?**

1. Yes
2. No
3. I don't know

[Display this question IF participant selected Yes for question T18.]

**T18b. Does [selected state or territory] have a fine if a child younger than 8 years old is not in a child seat or booster seat when riding in a taxi vehicle?**

1. Yes
2. No
3. I don't know

**T19. Has your taxi company provided you with information about local child passenger safety laws where you drive?**

1. Yes
2. No

**T20. Has your taxi company provided you with education on the need for child seats or booster seats?**

1. Yes
2. No

**T21. Has your taxi company provided you with any training on the correct installation of child seats or booster seats?**

1. Yes
2. No

[Display this question IF respondent selected Yes to T21]

**T21a. If yes, what was the training?**

[open response]

**T22. According to your taxi company's policy, whose responsibility is it to ensure a child younger than eight is in an appropriate child seat or booster seat?**

1. Driver
2. Passenger
3. Unsure

**T23. According to your taxi company's policy, whose responsibility is it to ensure a child seat or booster seat is secured properly in the vehicle?**

1. Driver
2. Passenger
3. Unsure

[Randomize display order of subquestions]

**T24. Please indicate how frequently you have engaged in each of the following actions while working at your taxi job:**

**T24a. Driven 5-10 MPH above the speed limit**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24b. Driven more than 10 MPH above the speed limit**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24c. Driven above the speed limit because a taxi PASSENGER pressured me to drive faster**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24d. Driven through a red light on purpose when I could have stopped safely**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24e. Used a handheld phone to send a text message or make a phone call while the taxi vehicle is STOPPED**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24f. Used a handheld phone to send a text message or make a phone call while the taxi vehicle is MOVING**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24g. Allowed more PASSENGERS than seat positions in my taxi vehicle**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24h. Allowed a child to ride in the front seat**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24i. Allowed children under 8 to ride without child seats or booster seats**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24j. Helped a CHILD PASSENGER buckle up or put them in a child seat or booster seat**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24k. Offered a taxi PASSENGER a child seat or booster seat**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24l. Driven while feeling tired or sleepy**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24m. Decided to end a driving shift early because I was too tired or sleepy**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T24n. Decided to skip a driving shift because I was too tired or sleepy**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

**T25. How many crashes have you been involved in while working at your taxi job (including times when you were not transporting a passenger)?**

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5

[Display this question IF respondent selected  $\geq 1$  crashes for T25]

**T25a. Please describe the first crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 2$  crashes for T25]

**T25b. Please describe the second crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 3$  crashes for T25]

**T25c. Please describe the third crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 4$  crashes for T25]



**T25d. Please describe the fourth crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected 5 crashes for T25]

**T25e. Please describe the fifth crash (select all that apply):**

1. Another car hit me from behind
2. I hit another car from behind
3. Another car ran a stop sign or red light and hit me
4. I ran a stop sign or red light and hit another car
5. Another car sideswiped me
6. I sideswiped another car
7. I drove off the road and hit something (for example a mailbox or a tree)
8. I hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

**T26. How many times have you ALMOST crashed while working at your taxi job (including when you were not transporting a passenger)?**

1. 0
2. 1
3. 2
4. 3
5. 4
6. 5

[Display this question IF respondent selected  $\geq 1$  near-crashes for T26]

**T26a. Please describe the first near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 2$  near-crashes for T26]

**T26b. Please describe the second near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 3$  near-crashes for T26]

**T26c. Please describe the third near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected  $\geq 4$  near-crashes for T26]

**T26d. Please describe the fourth near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

[Display this question IF respondent selected 5 near-crashes for T26]

**T26e. Please describe the fifth near-crash (select all that apply):**

1. Another car almost hit me from behind
2. I almost hit another car from behind
3. Another car ran a stop sign or red light and almost hit me
4. I ran a stop sign or red light and almost hit another car
5. Another car almost sideswiped me
6. I almost sideswiped another car
7. I drove off the road and almost hit something (for example a mailbox or a tree)
8. I almost hit a pedestrian or a bicyclist
9. Other (please describe): [open response]

**T27. What time of day do you usually drive at your taxi job? Select all that apply:**

1. Midnight - 4:00 AM
2. 4:00 AM - 8:00 AM
3. 8:00 AM - Noon
4. Noon - 4:00 PM
5. 4:00 PM - 8:00 PM
6. 8:00 PM – Midnight

**T28. How often do you drive on roads that you're not familiar with while working at your taxi job?**

1. Very often
2. Often
3. Sometimes
4. Rarely
5. Never

For this last section of the survey, please select the options that best describe you.

**D1. What is your race? Select all that apply:**

1. White
2. Black or African American
3. American Indian or Alaska Native
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. Some Other Race

**D2. Are you of Hispanic, Latino, or Spanish origin?**

1. Yes
2. No

**D3. Which of the following most accurately describe(s) you? Select all that apply:**

1. Male
2. Female

3. Non-binary
4. Transgender
5. Intersex
6. Prefer to self-describe: [open response]
7. Prefer not to say

**D4. Please identify your highest level of education:**

1. Some high school
2. High school degree/GED
3. Some college, no degree
4. Associate's degree
5. Bachelor's degree
6. Master's degree
7. Doctoral degree
8. Professional degree

**D5. What is your marital status?**

1. Single, never married
2. Married or domestic partnership
3. Widowed
4. Divorced
5. Separated

**D6. Do you have any children living in your household?**

1. Yes
2. No

[Display this question IF respondent selected Yes for D6]

**D6a. If yes, how old is the youngest child?**

[open response]