

Workplace Safety Issues of San Diego Taxi Drivers: What About Their Health & Safety?

A Study of the San Diego Taxicab Industry



Occupational Health Internship Program (OHIP)
Association of Occupational and Environmental Clinics (AOEC)
Employee Rights Center (ERC) & the United Taxi Workers of San Diego (UTWSD)
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I. Introduction

The city of San Diego is the eighth largest city in United States and the second largest city in California (sandiego.gov). It is known for its great tourist attractions, making San Diego one of the top tourist destinations. Nonetheless, the city has vulnerable working populations mainly because it has a large influx of immigrants from countries like Africa, Asia, and Latin America. Unfortunately, many of them encounter various issues that they have to try and overcome, such as, language barriers, cultural differences, social and economic hardship, and lack of good, safe jobs in mainstream society. In particular, the taxicab industry is an occupation where workers are exposed to high risk factors, and driving taxicabs is considered one of the most dangerous jobs nationwide.

Essentially, the National Institute for Occupational Safety and Health (NIOSH) indicated that taxi drivers are 60 times more likely to be murdered while on the job than other workers. The Department of Labor reported that they are also 80 times more likely to be robbed than any other U.S. worker. Studies indicate, from 1980 – 2009 there has been approximately 1,126 job related homicides of U.S. taxicab drivers (Centers for Disease Control and Prevention [CDC], 2012). For that reason, there have been recent studies illustrating that taxi drivers face high risk factors, suffer from poor working conditions, and do not know that they have the right to report injuries and illnesses, or file for workers compensation if they were to get hurt on the job. In particular, the Occupational Health Internship Program (OHIP) has carried out projects on taxicab drivers in previous years in other major U.S. cities, such as New York City and Los Angeles. Thus, the Occupational Health Internship Program (OHIP) of San Diego has created an opportunity for a research project to be conducted, which includes a more extensive study and documentation of the health and safety issues of San Diego taxi drivers.

II. Project Background

The eight week internship program involves us working closely with the United Taxi Workers of San Diego (UTWSD), and the Employee Rights Center (ERC). The ERC, a community partner, has provided UTWSD with organizational and legal support. UTWSD is a membership based organization that was formed in January of 2010, which followed the San Diego taxi drivers' strike in December of 2009. UTWSD is an organization that gives taxi drivers a space where they can come together and fight for their rights. Essentially, the organization empowers, supports, and advocates for taxi drivers, and their families by improving working conditions. As OHIP interns, we support UTWSD and this project will further the organization's mission of creating a better, equitable taxi industry in San Diego.

Moreover, San Diego's taxi industry is predominately composed of Somalian and Ethiopian taxi drivers. Majority of them are lease drivers and considered independent contractors under the local government. This serves as a significant problem because they are unable to collectively bargain, and they are not protected by federal or state labor laws. Since San Diego's taxi drivers are not protected by the California Occupational Safety and Health Administration (Cal-OSHA), this additionally creates another layer of problems because drivers have limited or no knowledge on their workplace health and safety. Furthermore, many of San Diego's lease drivers do not have health insurance. Some receive health care at their local community clinic, however many taxi drivers do not seek medical attention while injured on the job. The lack of health insurance puts them in an uneasy, difficult state because ultimately they are responsible for paying their own medical bills, which many of them cannot afford. Also, unlike other occupations, taxi drivers do not have retirement benefits, paid vacations, or sick leave.

Overall, drivers are working in an environment in which they are incredibly vulnerable in and often exposed to high-risk scenarios, such as being robbed, verbally threatened, physically attacked, injured, and sometimes victims of homicide. For example, two of San Diego's taxi drivers were murdered in fall of 2011- Mir Sadat Sahou, 68 years old and Jalaludin Hamrah, 39 years old (www.utwsd.org). Their tragic deaths exemplify the extent of unsafe working conditions of taxi drivers.

In all, the drivers face many challenges that negatively impact their lives, especially in regards to their health, safety, and overall well being. Certainly, they are workers who are categorized as being part of a vulnerable population. For that reason, this summer's project is very important, not only because it serves San Diego taxi drivers, but it is significant that the collective San Diego community are aware of, acknowledge, and understand the issues that drivers face daily. Thus, this occupational health internship program will shed light on the San Diego taxi industry, and address workplace health and safety issues to improve taxi drivers' working conditions.

III. Literature Review

"Taxi driving is considered to be one of the most hazardous occupations because of the risks involved" (Machin & Souza, 2004, p.258). Various approaches to improving the safety of taxi drivers have mainly focused on prevention by altering their environment through reduction of hazards. These approaches towards prevention include, in car alarms, protective screens, automatic door locks, and tracking drivers using the global positioning systems (2004). "The nature of work in the taxi industry is also quite different from conventional occupations. For example, the employer is ambiguous, work hours and income fluctuate on a daily basis, and the frequency and severity of hazards range from verbal abuse to homicide" (2004, p.258). It is evident that taxi drivers are part of a vulnerable working population and using various methodology to implement safer working environments is vital for their health and well-being.

In one taxi driver health and safety study, a particular model helped define the working environment of taxi drivers. The model is the *integrative model of safety climate* (2004). "This framework was used as a guide to develop the current exploratory model of taxi driver health and safety behaviour" (2004, p.258). Within this model and particular study, the findings indicated that the frequency and severity of hazards that taxi drivers face and their perceptions of their owner/management's commitment to health and safety issues, will each be a direct predictor of the physical health, emotional well-being, and unsafe behavior of taxi drivers (2004).

Overall, taxi drivers are associated within a social-ecological model that integrates the individual, interpersonal, organizational, community, and public policy levels (Glanz, Rimer, & Viswanath, 2008). When planning and implementing campaigns for policy change, this model is important because it can target multiple levels, and includes comprehensiveness, linkages across organizations, and coordination (2008). This model will have direct and indirect influences on taxi

drivers' health, lifestyle, and behavior choices (2008). The organizational, community, and public policy levels are essential because this is where changes within the system are made for policy implementation. Most importantly, if changes at the policy level are not immediate, taxi drivers' can overcome some personal obstacles through the individual, and interpersonal levels. Moreover, all of these levels can strongly affect the outcomes of the health and safety of taxi drivers.

IV. Methods

Through community based participatory research we wanted to distinguish the major causes of occupational health and safety issues among the San Diego taxi driver community. In order to develop an evidence-based study, we intergrated both qualitative and quantitative methods to fully embrace and define the issues among the taxi drivers. Also, we used the social-ecological model, which provided a greater scope and perspective of how we can approach these issues. Working closley with UTWSD was also imperative because of their knowledege and resources that pertain to the San Diego taxi drivers. All of these componenets guided us in our methodology.

We conducted a 64-question survey, which was composed of questions in regards to the health and safety issues among taxi drivers. The types of questions we used for the survey were open-ended, multiple choice, checkboxes, and a scale system (see Appendix A). The questions were formatted on a *Google* document survey template. We used the previous OHIP taxi driver studies from Los Angeles and New York City to guide us in the questionnaire design and overall theme of the survey. We wanted to target issues such as robbery, physical assault, diet, use/access to restrooms, smoking status, overall working conditions, and physical activity, beacuse these were most prevalant issues we sought from our research. We rehearsed the survey among each other and with a former taxi driver at UTWSD, to estimate how long it would take to do a face to face survey with a taxi driver in the field. The rehearsed survey took about 10-15 minutes.

The locations where we decided to survey were based off of prior knowledge of being San Diego natives, as well as suggestions from the UTWSD. The UTWSD was a major part in guiding us to locations where drivers were more accessible. The locations where we surveyed were: Fashion Valley Mall, Old Town Transit Center, Hyatt Hotel Mission Bay, San Diego Convention Center, Westfield Horton Plaza Mall, Westin Hotel, Marriott Marquis Hotel, San Diego Airport Holding Lot, Belmont Park, Bahia Resort Hotel, Staples parking lot in Pacific Beach, and at the Community Police Center for the UTWSD monthly meeting. The location that was most convenient and had an

abundance of taxi drivers was at the Staples parking lot in Pacific Beach. This is where many drivers would meet up to take a break and talk amongst each other. It was a prime location for us to interview because they had some free time and were not in a hurry. The parking lot was the most accessible and convenient for us to find large numbers of drivers. This allowed us to stay in one location for a longer period of time, rather than having to relocate to find more drivers. Furthermore, most of them were members of UTWSD so they were more aware of our objectives and willing to take part in our survey. The UTWSD had also informed drivers that we would be surveying in the lot prior to our arrival, thus some of the drivers were aware of our project beforehand. Also, drivers who were already surveyed encouraged other drivers in the lot to participate as well.

The way that we introduced ourselves and approached drivers was, “Hello, my name is.... I am from the ERC and the UTWSD, and we are doing a survey that targets the health and safety issues of taxi drivers in San Diego. Do you have about 10-15 minutes to answer some questions? It is completely confidential and anonymous.” We also had badges and business cards made for us by UTWSD, which displayed our name and titles (see Appendix B).

We surveyed for a total of 5 days and an average of 6-7 hours per day. In any given area, we typically surveyed taxi drivers from the end of the taxi line and worked our way up. We were informed by UTWSD that taxi drivers line up in order of who arrived first, thus drivers at the front of the line are called up the quickest to pick up passengers. This was the best approach when interviewing drivers because those at the end of the line would have more time to complete the survey. To avoid incomplete surveys we would not start interviews with taxis that were first in line. Nonetheless, we did not have any set agenda on what type of drivers we wanted to survey, given that permit holders, lease permits holders, and lease drivers can have varying perceptions and opinions regarding their occupation as a taxi driver. Therefore, we did not discriminate and approached all drivers equally.

We entered our survey data using an Excel spreadsheet. Then we imported the results into a *Google* documents spreadsheet, and converted and interpreted it into a summary of graphs and tables (see Appendix C).

V. Results

We collected 50 surveys total. We had 40 complete and 10 incomplete surveys. The incompleteness of surveys was due to drivers not having enough time to complete the surveys. (All results found in Appendix C).

The most significant health related findings were that 68% of drivers have lower back pain due to their occupation, 38% of taxi drivers have gained weight since the start of their job, 50% of drivers feel very stressed, and an overall 42% say that their health has worsened in the past 5 years.

On a more positive note, we were surprised to find out that 34% of drivers had seen a doctor this year for a yearly check up. This finding is important, because we are able to evaluate and distinguish how taxi drivers perceive their health in affiliation to seeking medical care. Also, 66% of drivers do not smoke. However, one taxicab driver that works for Yellow Cab and has been driving for four years indicated something quite significant. He said, "I used to never drink coffee. Now I have to drink coffee because I have to be alert.... I can feel like there's something [physically] wrong with me even though I am not really sick....I also never used to smoke. Now I smoke...about six times a day, but only when I am driving taxis because I am so stressed."

One important issue that was brought to our attention through UTWSD that we decided to include in our survey, was how often taxi drivers used the restroom in a day. 44% of drivers said they only use the restroom 1-2 times a day, which consequently means that they do not drink enough water throughout the day, to avoid having to use the restroom. We found a few reasons for this. First, drivers reported that access to usable restrooms is scarce and that many hotels in San Diego, especially downtown, do not allow for drivers to use their restroom facilities. Thus, 68% of drivers said that there are not enough places to use the restroom if needed. Another reason is because using the restroom is difficult to do when having to obey the 12-foot rule, which indicates that taxi drivers are not to be more than 12 feet away from their taxis (www.utwsd.org). Lastly, if taxi drivers have to use the restroom throughout the day they can lose potential business, for the time it takes to actually find a restroom and park their cab legally, they can lose potential customers. Although when we asked taxi drivers where they would go if they needed to use the restroom, common places that came up were: public restrooms at the park and beach, gas stations, Starbucks, and fast food restaurants.

Findings related to safety indicate that 70% of drivers report having been verbally assaulted while on the job, 81% of drivers would like cameras installed in their taxicabs, and 67% of drivers would like partitions installed in their cabs. Drivers explained during interviews, that cameras would

help prevent assaults and violent behaviors from passengers because they are being videotaped. On the other hand, the videotaping will only provide justice if the police department reviews the tapes and proceeds to arrest the perpetrators. Furthermore, some drivers pointed out that cameras would not *physically* protect them from violent passengers. For that reason, drivers explained that the partition would act as a safety barrier that will prevent physical assault and invasion of personal space. However, some taxi drivers expressed that a partition will not be a good addition because the drivers themselves would feel imprisoned. A few added that it would also make the passengers feel uncomfortable and thus be an unpleasant experience. Drivers who reported that they have been physically assaulted during their time as a taxi driver, 67% indicated that in their opinion, they were assaulted because the customer was highly intoxicated or under the influence of some type of substance. Essentially, 93% of these physical assaults took place late night (9:00 p.m. - 4:00 a.m.).

Issues that taxi drivers had the most in common, in regards to their occupation, were the high lease rates (62%), ticketing from police officers (43%), and the long work hours (19%). Since many taxi drivers at the Staples store parking lot and at the UTWSD meeting in July had more free time to be surveyed, they elaborated on the issues of lease rates and ticketing. In regards to their lease rates, some of the taxi drivers said that their lease was, “\$420 per week, but it will go up to \$450 by the end of July, if it hasn’t already.” Another individual we surveyed recently quit working as a taxi driver and he replied, “It is \$420 a week lease, which is \$60 a day. I can’t pay my rent sometimes because everything goes to the lease.” This driver has been a part of the taxi industry for nine years, and drove for both the Orange Cab and Yellow Cab Company. As a result, the taxi drivers explained that they are very stressed due to the high demand to meet the lease rates.

Additionally, the issue of being ticketed by police officers was another indicator of their stress levels. A few of the taxi drivers who typically work in downtown San Diego reported, “Passengers flag us down and we stop to pick them up, or drop them off, but then we get ticketed.” In particular, drivers pointed out that 5th Avenue in downtown is the number one location where the majority of the ticketing occurs. The reason being is because this is a red zone area, which means no vehicles are allowed to stop at any given time. Staff from UTWSD indicated that other major cities such as New York City, Los Angeles, and San Francisco have exceptions for their taxi drivers, allowing them to pickup and drop off even in red zone areas. However, San Diego taxi drivers are not exempt from this rule, thus creating the issue of being “over ticketed” by the police.

Overall, the taxi drivers in this cohort worked for an average of 6.64 years, and 58% of drivers worked for Yellow Cab Company. In regards to the long work hours, many drivers we surveyed worked 7 days a week for 12 hours per shift, which are the typical work hours for lease drivers. Also, about half of the drivers worked the morning shift (typically 4 a.m. – 4 p.m.) and the other half worked the night shift (typically 4 p.m. – 4 a.m.). However, many indicated they drove night shifts because of the influx in customers, even though driving the night shift was more dangerous. Also, drivers reported that it does not matter if they are sick, injured, or if they are having mechanical problems with their taxis, they still have to work and pay the lease rate for that day/week. “There are no off days,” was one of the driver’s statements, which accurately reflects the majority of the drivers’ perspectives on their long works hours.

Some of the other issues drivers indicated, included heat from the gas pedal, vehicle maintenance, work related injuries, and difficult customers. The specific problem regarding heat from the gas pedal was primarily an issue for drivers whose taxicabs were a Ford Crown Victoria, which was the vehicle most common amongst the taxi drivers we surveyed. These drivers indicated their vehicles were old, had high mileage, lacked a good air conditioning system or did not have AC, and felt excessive heat from under the accelerator/gas pedal. As a result, some of them who felt like this was a major concern reported having dry skin, even blisters and burns on their legs and feet. Essentially, taxi drivers said their Crown Victoria taxicabs had many issues in terms of upkeep and maintenance.

We also discovered that taxi drivers typically do not put time aside for breaks. In our opinion, a break is defined as a physical and mental disengagement from one’s work environment. However, many taxi drivers divulged that their “breaks” are just waiting in their cab for customers, or waiting around their cab (not more than 12 feet away) until they get a customer call. 50% of drivers indicated that they do not take breaks, 8% of drivers took one break during their shift, 10% of drivers took two breaks, 8% of drivers took four breaks, and 6% of drivers took three breaks. Nonetheless, it is important to keep in mind that these are 12-hour shifts, and a standard 8-hour workday requires 2 fifteen-minute breaks and a 30-minute to one-hour lunch.

Essentially, the drivers who had time to elaborate and talk more in depth about their health and safety issues, provided us with a deeper insight and perspective to some specific scenarios or incidents that have occurred. For that reason, we felt it was significant to share some of the quotes from the taxi drivers that we interviewed:

- “Many people view us as lazy who does nothing. We face many problems...from the owner and passengers. It isn’t an easy job...we can get fired from the job easily....[The owner] threatens us if we complain or say we don’t like something.”
 - *Yellow Cab Driver, driving taxis for 4 years*

- “I don’t feel safe and don’t wear a seat belt...because there was a driver getting strangled with his seat belt....I don’t wear a seat belt when I’m feeling unsafe....[You] never knows who gets into your cab.”
 - *Orange Cab Driver, driving taxis for 9 years*

- “Many guys die, they die at young age....They have many health issues like diabetes, kidney failure, high blood pressure. It’s a horrible job.”
 - *Yellow Cab Driver, driving taxis for 8 years*

- “I am just driving to survive.”
 - *Yellow Cab Driver, driving taxis for 5 years*

- “They, [the owners], are holding us hostage. We have no choice but to work this job and people don’t recognize our struggles and issues.”
 - *Yellow Cab Driver, driving taxis for 4 years*

- “Even if it’s just one incident, it affects you for a while. I am traumatized. There is no safety for driver....[And] the cops...they don’t show up at all, especially on the weekends. They say they’re busy. I am not satisfied with how they handled it.”

(This quote was in regards to a driver who unfortunately have been a victim of physical assault).

 - *Yellow Cab Driver, who have driving taxis for 4 years*

- “We’re like slaves. We’re forced to drive in this condition”.
 - *Yellow Cab Driver, driving taxis for 6 years*

VI. Limitations

A major issue that we faced as researchers in this given community was the accessibility and quantity of taxi drivers to survey. Given the physical layout of San Diego, such as larger suburban

areas and small urban areas, it was harder to find large numbers of taxis compared to other large cities like New York and Los Angeles.

Another limitation that altered the number of taxi drivers that we were able to survey, was at the San Diego Airport holding lot. This location was recommended to us by the UTWSD and would of been a great location to survey given the large quantity of taxi drivers. Unfortunately, we were told to leave the property after an altercation broke out between the lease drivers and permit holders, due to political disagreements. We both had only surveyed one taxi driver when we were approached by authorities, and were told that we needed permits from the airport to continue our surveys on the property. Ultimately, we were not able to obtain permits and could not survey the taxi drivers at the airport holding lot.

Moreover, currently there are no studies based in San Diego that pertain to taxi drivers. The articles that we reviewed were based in other major cities. This prevented us from conducting a more specific and condensed survey, because we did not have the background information necessary, like certain demographics and statistics. Thus, we had to develop a survey that included a broader spectrum of questions.

Due to funding, other limitations included lack of proper data collection and interpretation statistical software, such as SPSS or STATA. This was needed in order to elevate our study results with higher levels of statistical analysis. Complex correlations and regressions were impossible to attempt because we did not have adequate statistical software to perform these tasks.

Lastly, there was the issue of the time it took to complete the survey, which was in part due to the language barrier. Our objective from the beginning was to create a survey that encompassed a range of questions that targeted health and safety hazards in the taxi drivers' workplace. However, understanding the dynamic of their workplace and their busy work schedule, we had to make multiple revisions to our survey in order to allocate 10 to 15 minutes per interview. All the drivers spoke English; however the majority of the drivers' native language was either Somali or Ethiopian. That's why drivers who did not speak English fluently had difficulty with comprehension of our survey questions. As a result, communication between us and the drivers was difficult at times. Thus, the language barrier affected the survey's time length, making the surveying process even longer. However, we did try to alleviate this issue by repeating and or elaborating on the questions drivers

did not understand. In addition, we would also ask other drivers to help translate who spoke English more fluently.

VII. Recommendations

Based on the data collected from this project, our knowledge about the San Diego taxicab industry has increased. We are now more aware and have a better understanding of drivers' health and safety issues and concerns. As low wage, immigrant taxi drivers they face a great deal of challenges. From analyzing the data and finding common themes, we propose several recommendations for different organizations. In addition, we also provided recommendations for the stakeholders – taxicab drivers. Overall, the goal of these recommendations is to improve the workplace and working conditions for taxicab drivers, particularly those of San Diego.

General Recommendations

- *The United Taxi Workers of San Diego (UTWSD)* –

Since UTWSD is the only organization in San Diego that specifically works with taxicab drivers, and provides a space for unity and collaboration, we recommend that UTWSD continue to outreach, empower, and educate. It is important to outreach and educate San Diego taxi drivers, but it is also essential to outreach and educate the larger San Diego community. The general public should be more aware and



informed on issues that taxi drivers face, because drivers are a part of the transportation services for San Diego residents and visitors. As a result, both taxi drivers and their passengers will be safer and the efficiency of the San Diego taxi industry will increase.

Moreover, UTWSD should consider making the membership fee more affordable, which will allow for more taxi drivers to join. Since many taxi drivers indicated they face financial hardship due to having high lease rates, having a smaller membership fee will make joining the organization more accessible. This will help the organization grow and flourish.

We also recommend following up on our give back products (first aid kit & the informational flyer) to see if they are beneficial for drivers. Note what the drivers' responses are to the give

back products. Lastly, if possible, try to follow up on the survey questions by surveying more taxi drivers. UTWSD can use the original survey of 64 questions, create a more comprehensive one, or even split up the survey into sections to keep it in a shorter time frame.

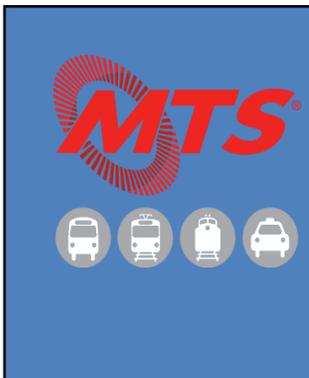
- Employee Rights Center (ERC) –

Continue to work with the United Taxi Workers of San Diego (UTWSD) by empowering and advocating for their organization. As a community partner, it is significant that the ERC continues being active and involved in UTWSD's mission statement, goals, and agenda. Having strong, active community partners is one of the important keys to supporting one another.

- San Diego Metropolitan Transit System (MTS) –

We recommend that San Diego's MTS set up a professional transportation system where taxi drivers are not considered independent contractors, but listed under the same system as bus drivers, trolley workers, and security guards, etc. Furthermore, MTS should consult with Cal-

OSHA to have taxi drivers covered and protected by Cal-OSHA.



In addition, many drivers indicated a list of problems with their current taxicab vehicle. That is why we also recommend that MTS's inspections be extensive in order to regulate the vehicle's condition so it is safe for the drivers. As a result, this would improve their working conditions.

We also highly suggest that Ordinance 11 be revised. For instance, section 2.4 m in particular should be taken into consideration for revision, and or removed. Section 2.4 m is the rule that indicates that drivers who are more than 12 feet away from their vehicle will receive penalties. Essentially, drivers are ticketed as a penalty for breaking this rule, mainly because they leave their taxi to use the restroom. This illustrates that taxi drivers' dignity and rights are violated when a rule as such is implemented. Therefore, we recommend that certain sections of Ordinance 11 be looked over, revised, or even removed because some of the rules negatively affect drivers' health, safety, and sense of dignity.

- California Occupational Safety and Health Administration (Cal-OSHA) –

Cal-OSHA should consider including taxicab drivers under their state labor laws for employees. This research project and other significant studies conducted throughout major U.S. cities have clearly demonstrated that taxi drivers



certainly belong to a vulnerable population of workers. Their occupation in the taxi industry is incredibly dangerous because they are exposed to high risk scenarios on a daily basis. Without a doubt, the majority of taxi drivers work long hours, seven days a week. They are not only vulnerable due to their poor, unsafe working conditions, but have a higher probability of enduring workplace illnesses, injuries, and even fatalities. That is why we believe that taxicab drivers need to be protected under Cal-OSHA so that they know their rights to report unsafe conditions without retaliation, have workers compensation insurance, and improve their overall working conditions.

- Permit Holder (also known as the taxicab owners) –

It is critical that permit holders, or taxicab owners, are held accountable for the lease drivers. In particular, owners should take full responsibility of their taxicabs regarding issues of upkeep and maintenance. From what drivers reported in regards to driving unsafe vehicles and owners neglecting the maintenance, we believe that the lease drivers should not be held solely accountable for maintaining and/or fixing their taxis, especially because it is work related. Owners who hold themselves accountable for the vehicles' maintenance will improve the drivers' working conditions.

We also recommend that taxicab owners help lease drivers by providing resources and offering certain benefits, such as health insurance, paid time off, and sick leave. Owners should also consider lowering their lease rates because that is one of the biggest challenges lease drivers face. Thus, instead of an unequal, unjust, and negative relationship between owners and drivers, the dynamic of the relationship will improve and become more positive and sustainable.

- Law Enforcement: San Diego Police Department (SDPD) –

It is significant that the police officers communicate with the ERC, UTWSD, and the taxi drivers. There needs to be a protocol where the police respond efficiently to any harm, robbery, and violence that occurs against taxi drivers. Essentially, taxi drivers should feel safe and

protected by police officers, and trust that perpetrators of crime will receive legal consequences that are fair and just.

Likewise, the issue of ticketing taxi drivers, particularly in downtown San Diego, must be addressed. That is why we recommend that the stakeholders and law enforcement have a safe space where they can discuss the issues at hand and solve the problem of “over ticketing”. We also suggest that SDPD provide training for taxi drivers because it is important to educate the drivers on laws and regulations of the road, so that they are fully informed and understand the rules. Nonetheless, the safe space for discussion and training would allow for taxi drivers and SDPD to create a positive relationship, where drivers can gain respect and trust for the law enforcement.

- City of San Diego –

Our project’s results show “high lease rates” as one of the top three challenges that taxi drivers face as being employed in this industry. Essentially, this issue has negatively impacted the health, safety, and well being of lease drivers. It is important to understand that drivers reported having a high amount of stress as a result of this issue. Since the lease rates are high, and continue to increase, drivers have to work more days and longer hours in order to meet the rate. This also means that they are not making enough income to support themselves or their families, which essentially does not allow for social mobility and they will continue to be identified as low-wage immigrant workers. High lease rates are controlled by the taxicab owners, which is the root problem and we must call attention to it. It is unjust that there is no cap on lease rates. Therefore, we strongly recommend there be a cap put on lease rates in order to improve the lives and working conditions of lease taxi drivers.

In addition, it is important to hold taxicab permit holders, or owners accountable for their vehicles, but also held accountable for their employees, the drivers. Since taxi drivers are not represented by a union, it is even more crucial that they are not exploited by the permit holders. Exploitation of lease drivers maintains the unequal power relationship between drivers and owners, and should be dismantled. Thus, the city of San Diego should be aware of this vulnerable working population, and protect the most vulnerable in order to better our society as a whole.

- Taxicab Design & Engineering –

The vehicle design plays a vital role to the taxi drivers' comfort, health, and safety. We noticed while doing the face to face surveys that a majority of the drivers had at least one, if not more, issues with their current taxicab design, especially the Ford Crown Victoria taxis. Drivers indicated there were many problems with this specific make and model. The reaction we got from the drivers, along with our findings, indicated that many taxi drivers had the following problems: uncomfortable seats, no air conditioning, heat from the accelerator or gas pedal, high mileage, and many other mechanical problems. Note that some of these recommendations also fall under the responsibility of MTS and the taxicab permit holder/owner.

Taxicabs should be designed in a way that are comfortable, yet safe for the drivers. We have specific design changes and recommendations for the seat, air conditioning system, and accelerator or gas pedal. Essentially, all taxicab vehicles should have an AC system and one that runs properly. A well functioning AC system is not only needed and beneficial to the drivers, but to the passengers as well. As a result, this increases the professional transportation services for everyone. Secondly, the accelerator or gas pedal should be designed in a way to ensure that heat does not generate from the engine, so drivers do not feel immense heat on the bottom of their feet and lower legs.

Lastly, the seat should be more comfortable to improve the ergonomics of the vehicle. Drivers should have the ability to recline their seat backward, forward, up and down. Also, the seat should have a built-in lumbar support to aid drivers, since they are sitting in their seats for long periods of time (www.ehow.com). The lumbar support in taxicabs will increase the driver's health and improve ergonomics by preventing body aches pains . These changes will surely improve taxicab drivers' health, safety, and overall well being.

Future Research Recommendations

This research project was the first to be conducted in San Diego that focuses on the city's taxi industry, and the health and safety for this occupation. The project tried to capture a wide range of problems and challenges that drivers may face. Thus, we recommend for future research to use the results of the project and determine one to two key issues to focus on, and then follow up on those issues by asking more specific survey/interview questions. For example, one can follow up on these key issues: taxi drivers' health conditions, lower back pain, access to health insurance, high lease rates, excessive ticketing from police, and lack of access to restrooms, just to name a

few. Focusing on more specific issues will give future research a more in depth profile of taxi drivers' health and safety.

One specific area in San Diego that this project did not have a better representation of is the San Diego Airport holding lot, due to political issues. Therefore, surveys or interviews for research in the future should include this area to receive input from airport taxi drivers. Additionally, the holding lot is composed of both taxicab owners and lease drivers. Thus, it would be crucial to include both the drivers' and owners' perspectives.

Furthermore, future researchers should keep in mind the length of the survey/interview questions. Majority of taxi drivers do not have much leisure time to take a 10 to 15 minute survey. We recommend surveys be between 5 to 7 minutes to allow drivers enough time to answer and complete the survey to create stronger research statistics.

Stakeholder Recommendations

• San Diego Taxicab Drivers –

As a taxicab driver, we recommend that drivers know their rights as a worker in the taxi industry. We highly recommend that drivers join UTWSD and become a member. The organization is very helpful, supportive, educational, and encouraging. The UTWSD has great resources and guidance to empower and advocate for all taxi drivers and their working conditions. On that note, we also suggest that drivers educate and empower each other. It is important that taxi drivers unite and work together to create long term changes. Lastly, please use our *Health and Safety Suggestions* flyer, along with the *Make Your Own First Aid Kit* pamphlet, and the first aid kits themselves. Take care of yourself in regards to your health and mental well being.

VIII. Personal Narratives

Spending this summer as occupational health and safety interns opened our perspectives on vulnerable working populations. In particular, working with taxi drivers, allowed us to fully understand their occupation and the health and safety issues that they face daily. We did not have much knowledge about the taxicab industry and drivers' working conditions prior to this research project. However, we did know that taxi drivers are not protected under OSHA. Thus, it seems even more important to focus in on this particular cohort. The project has given us the opportunity to gain

alternative insights to certain challenges of low wage immigrant taxi workers, which goes unrecognized by the general public.

Moreover, we have enjoyed the relationships we have made this summer with UTWSD and the ERC, as well as the taxi drivers that we surveyed. We discovered through the surveying process that taxi drivers nationwide face similar workplace issues, but each driver has their own experiences and perspectives. As a result, the surveying process was special because each driver we surveyed provided us with a more in depth, personal point of view. For that reason, we are grateful to have had the chance to converse with so many drivers. Not to mention, that we appreciate the time and energy they put forth during the surveying process, since we quickly learned that time is money in their field of work. In the end, not only was it important to gather data and put together our final research project, but to build sustainable relationships within the community, and touch base in the future after the internship program has ended. We are very pleased and excited to have been given this opportunity to be a part of the OHIP program, and to conduct this particular research project on San Diego taxi drivers. It definitely opened many doors for us both educationally and professionally.

IX. Conclusion

In conclusion, this research project identified many risk factors that taxi drivers are exposed to on a daily basis. The most significant health and safety factors that we found through our research were, verbal assault, use/access to restrooms, stress levels, lower back pain, public policies, ergonomics, long work hours, and lack of health insurance. It is crucial that future studies on the health and safety of San Diego taxi drivers, continue to investigate further on these issues. This vulnerable working population endures a lot of unjust occurrences that can be prevented with a few alterations at the organizational, community, and public policy levels. Drivers need to be protected by a larger entity that can assure health and safety regulations are implemented and enforced. As well as, the San Diego community as a whole needs to become more aware of the health and safety concerns that taxi drivers face, and to aid the issue through education and philanthropy.

X. Acknowledgments

First and foremost, we want to thank the United Taxi Workers of San Diego (UTWSD) for all their help, guidance, encouragement, and support. Essentially, they gave us an encompassing scope of their organization and how they support taxi drivers. They certainly played a significant role

in our research project because they assisted us by establishing and organizing interviews within the San Diego taxi driver community. UTWSD gave key suggestions as to where we should go to survey taxi drivers, along with the best hours to survey. Thereafter, they also provided us with feedback in regards to our survey. The organization played an important role in guiding us in our area of research and assisted us in better understanding the San Diego taxi industry.

Moreover, we also want to thank the Employee Rights Center (ERC) for their help and support as well. They linked us to UTWSD, provided us with connections within the community, and guided us with ideas and feedback on our surveys.

Last but not least, we want to acknowledge and thank all the taxi drivers that took the time to take our survey and talk to us. We were able to establish a relationship with them and create an educational dialogue. Doing so informed us about the demographics of the taxi drivers and being in this line of work. We understood that some may hesitate, or even refuse to take our survey due to fear of retaliation from the permit holders. Therefore, we want to recognize that without their willingness to take the survey and discuss their occupation with us, we would not have been able to conduct this project. As a result, we are able to educate others on taxi drivers' health and safety issues in the workplace. Certainly, we gained an appreciation for this vulnerable population of workers and will continue to support, empower, and advocate for taxi drivers in San Diego and nationwide.

XI. References

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