

MOTORCYCLE FATALITIES IN THE STATE OF HAWAII:
A POLICY ANALYSIS FOR STATE LAWMAKERS TO REDUCE DEATH
AMONG MOTORCYCLISTS THROUGH HELMET USE

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Executive Summary

As the prevalence of motorcycle use in the state of Hawaii continues to grow, so does the number of motorcycle fatalities occurring in the island state. In recent years, the rate of motorcycle fatalities in Hawaii has grown at rates reaching 300% to 800% above the national average. This, along with Hawaii's existing motorcycle helmet policy (which requires helmet use only for motorcyclists less than 18 years of age) and the scientific evidence behind the ability of helmet use to reduce head injury and save lives, has created a public health issue that needs to be addressed through Hawaii's policy.

This policy analysis assesses Hawaii's existing motorcycle helmet policy through a review of the existing literature around motorcycle safety, helmets, and policy, and relates the key findings to the state of Hawaii through interviews with Hawaii state lawmakers. It is identified that Hawaii's motorcycle helmet policy is shaped by factors much like those found on the mainland United States, with the two primary considerations being the ability for helmets to help protect life versus mandatory helmet use infringing on individual liberties.

Motorcycle fatalities in Hawaii would be reduced through stronger mandatory helmet use policy. For the purpose of saving lives, it is recommended that Hawaii enact a mandatory helmet policy. In lieu of mandating helmet use for all motorcyclists in Hawaii, it is recommended that Hawaii state lawmakers focus Hawaii's policy efforts at protecting young motorcyclists on two fronts, by (1) requiring helmet use for those less than 25 years of age, and (2) encouraging or incentivizing voluntary helmet use among young motorcyclists less than 35 years of age.

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Chapter I: Introduction

The state of Hawaii is currently experiencing an all-time high death rate amongst motorcycle riders. Between 2007 and 2011, Hawaii averaged 29 deaths per year (Hawaii State DOH, 2012). According to a recent Governors Highway Safety Association report (GHSA, 2013), between 2011 and 2012 the number of fatal motorcycle accidents in Hawaii increased 37% in the first nine months, more than eight times that of the national average increase of 4.3%.

The effects of a fatal motorcycle accident are widespread, from the personal and emotional impacts to family and friends, to negative financial, economic, and socioeconomic impacts to the Hawaii community. Fortunately, the number of fatally injured motorcyclists is within immediate control if the state of Hawaii chooses to take action. The National Highway Traffic Safety Administration (NHTSA) has reported more than two-thirds (67%) of fatally injured motorcyclists and nearly all (96%) fatally injured moped operators in Hawaii between 2005 and 2009 were not wearing a helmet at the time of accident (NHTSA, 2012a). Wearing a helmet while operating a motorcycle is the most fundamental safety protocol a motorcyclist can take to protect their life, and it is the only scientifically proven method for improving the safety of motorcycle riders, according to the Centers for Disease Control and Prevention (CDC, 2012). The state of Hawaii has not required all motorcycle operators wear safety helmets since 1977. The repeal of Hawaii's mandatory helmet policy has had a detrimental and direct effect on the number of motorcycle fatalities in Hawaii. This leads to the questions this policy analysis aims to address:

- What factors have shaped Hawaii's existing motorcycle helmet policy(ies)?
- What measures can Hawaii state policymakers take in order to reduce the number of motorcycle fatalities that occur in the state?

Given the number motorcycle fatalities which occur in the state of Hawaii and the notion that many of those deaths could be mitigated through preventive measures (such as wearing a helmet), it is important to address Hawaii's existing policies related to motorcycle safety and evaluate to what extent they are serving in the best interests of the community. This analysis presents the historical progression of helmet policy and paints a picture of how current policy was influenced and formed. Because this paper will focus on motorcycle safety policy, it speaks primarily to state policymakers in order to provide an understanding on the implications of Hawaii's policy.

This policy analysis will evaluate the key issues related to Hawaii's motorcycle safety policy and present the positive and negative impacts that policy changes may have. While the overall goal of this analysis is to identify potential policy changes that may serve to reduce the number of preventable deaths among motorcyclists involved in accidents, it also takes in to account the need for a balance between the law, the people, and the importance of finding a preferable outcome for the community as a whole. This analysis provides lawmakers with specific recommendations that should be taken in order to help achieve the target of fewer motorcycle fatalities. Lastly, this analysis forecasts a number of scenario-based futures highlighting some potential outcomes Hawaii may experience depending upon what actions, if any, are taken in regards to motorcycle safety policy.

Chapter II: Overview

Significance of Motorcycle Safety Policy in Hawaii

Motorcycle safety policy or lack thereof contributes significantly to the number of motorcycle fatalities that occur each year in Hawaii. The most influential policy that will affect the number of motorcycle fatalities in any U.S. state is mandatory helmet legislation. As will be discussed, mandatory helmet policies are 100% effective at reducing the rate of motorcycle fatalities when enacted, and when mandatory helmet policy is not in effect such a legislative decision is 100% effective at increasing the rate of motorcycle fatalities. While the benefits of helmets are widely known to reduce the likelihood of death in the event of an accident, the majority of the states in the U.S., Hawaii included, do not require universal helmet use among motorcyclists, thus leading to an increase in preventable deaths.

The state of Hawaii is a prime candidate for a motorcycle safety policy analysis for several reasons. A state's climate plays a significant role in the number of motorcycle fatalities. As cited by GHSA (2013), 23 states self-reported warmer-than-usual weather as a factor in their state's numbers of recent motorcycle fatalities. This is primarily due to increased ridership when the weather is more favorable for operating a motorcycle. An analysis of motorcycle fatalities around the country has shown 70% of fatal accidents in 2011 occurred between the months of April and September, the traditional warm, summer months, which define the primary riding season. The favorable weather conditions in Hawaii create a year-round riding season that increases the likelihood for an individual to use a motorcycle as a primary means of transportation, and as the use of a motorcycle increases so does the number of opportunities to be involved in a serious accident.

Historical national data shows a consistent and direct trend among gas prices, motorcycle registrations, and motorcycle fatalities (GHSA, 2013). As gas becomes increasingly more expensive, people tend to drive vehicles with better fuel efficiency, such as motorcycles. Therefore, as the price of gas increases so does the number of motorcycle registrations as people seek relief from rising fuel prices. As the number of registered motorcycles increase, so does the number of motorcycles on the road and the number of people who are at risk for sustaining serious motorcycle crash injuries.

With Hawaii's gas prices among the highest in the nation (Tuttle, 2012) as well as fostering a favorable year-round riding season, Hawaii's problem of preventable motorcycle fatalities is of the utmost importance. When the state's recent dramatic increase in motorcycle fatalities is considered, Hawaii is poised as a state with much potential for substantial life-saving policy change.

The Intended Audience for this Policy Analysis

This primary audience for this analysis is Hawaii state lawmakers. These individuals are the primary gatekeepers of Hawaii's legislative process, as they are the ones who hold the greatest control over which policies are heard, discussed, considered for implementation, implemented, or brushed under the rug. Although this paper is directed toward those in a decision-making position, it may also appeal to others in the local community who hold an interest in Hawaii's motorcycle safety policy. This may include supporters of motorcycle safety legislation, law enforcement officials, and emergency responders. This paper may also be of interest to researchers in other states who may be performing similar analyses. Additionally, since this paper presents information from a variety of perspectives, it may appeal to an array of others such as

motorcycle groups and clubs, opponents of motorcycle safety policy, and individuals who may have been touched by a motorcycle fatality or serious injury.

What is a Policy Analysis?

A policy analysis is a research method and problem solving process that may be undertaken for a variety of applications and purposes. Through policy analysis, decision makers are provided with information regarding the effects that policy may have socially, economically, environmentally, or the effects of policy across any number of other factors that are relevant to the particular policy that is being analyzed. Eugene Bardach (2012), an emeritus professor of public policy at the University of California, Berkeley, best describes the policy analysis method through an approach he calls the Eightfold Path.

Bardach's (2012) Eightfold Path approach to policy analysis is composed of eight fundamental steps. These eight steps are not necessarily completed in the same order every time, nor are all eight steps necessary or significant to every policy analysis. However, the Eightfold Path serves as a foundation for the policy analyst and provides a road map to keep the researcher or analyst on a pre-defined and proven path. Bardach's Eightfold Path consists of the following eight steps:

- Define the problem
- Assemble some evidence
- Construct the alternatives
- Select the criteria
- Project the outcomes
- Confront the trade-offs
- Decide
- Tell your story

Defining a problem may take the role of identifying perhaps a social, economic, or health problem that a community is facing and that can be addressed and improved through policy. The problem that is addressed through this policy analysis can be broadly defined as an excessively high number of motorcycle fatalities occurring in the state of Hawaii. However, as indicated a policy analysis is useful for addressing or understanding a broad spectrum of problems or issues. For example, evaluating the social and community effects of legalizing same-sex marriage, evaluating the economic and socio-economic impacts of permitting the use of medicinal marijuana, evaluating the impact of placing a landfill in a community, or identifying ways to reduce pollution in the environment are a few potential applications of policy analysis.

Bardach's (2012) second step in the Eightfold Path, assembling some evidence, is likely to be the most time consuming. It is in the evidence collection process that the analyst or researcher pours over existing research and studies, analyzes data and statistics, collects data through interviews with people, waits for appointments with interviewees, and ultimately spends the majority of his or her time. This holds particularly true for this policy analysis.

The remainder of components in the Eightfold Path, which lead up to the telling of the story, typically occur in a blended fashion. Policy alternatives are constructed which are intended to solve or mitigate the problem defined earlier (the alternatives for this policy analysis are presented in Chapter VI). Evaluative criteria are selected and applied to the projected outcomes of the alternatives in order to create an image of the future (the principle evaluative criteria of this policy analysis are the ability of an alternative policy to reduce motorcycle fatalities in Hawaii and the preservation of self-

perceived liberties and freedoms among adult motorcyclists). The outcomes of the alternatives are presented to the audience (as demonstrated in the future scenarios of this policy analysis, refer to Chapter VII), the trade-offs between each alternative and its outcomes are confronted, and a recommendation is ultimately made as to how the defined problem may be best solved, mitigated, or otherwise addressed (Bardach, 2012).

The topic of motorcycle helmets and safety policy is often controversial, invoking an array of thoughts and emotions from various stakeholders. Historically speaking, this has proven to be true in Hawaii. When the topic of motorcycle helmets and safety arises in Hawaii, the voices of many stakeholders share a diverse set of views and perspectives. Motorcyclists, health care facilities, health insurance companies, state agencies, concerned citizens, lawmakers, and others, all have views and opinions to contribute to the issue and the formation of policy. Identifying the stakeholders relative to Hawaii's motorcycle helmet policy, understanding their individual and oftentimes unique views, and synthesizing those views and opinions are vital to the formulation of meaningful policy.

Motorcycle helmet policy affects the Hawaii community as a whole. The process begins with individual motorcyclists who may (or may not) wear a helmet while operating a motorcycle. It then involves emergency responders and health care facilities who are responsible to provide care for those involved in motorcycle accidents. The community as a whole is involved, as the community may bear the burden of expenses related to an accident. In-between these broad categories of stakeholders are lawmakers who have implemented policy, governmental agencies who have a responsibility of looking out for the interests of the people of Hawaii (e.g., related to health of the state, or

transportation and roadway safety), and the many other individuals and entities who may be impacted by helmet and safety policy. In order to produce meaningful policy with positive health outcomes, it is necessary to consider the views, perspectives, opinions, and impacts of and to not only one group of stakeholders (most commonly the motorcyclists), but rather those of all persons and parties involved.

In this policy analysis, the policy under investigation is Hawaii's motorcycle helmet policy. This analysis explores Hawaii's existing motorcycle helmet policy in order to (1) explain the factors which have shaped such policy, (2) identify the stakeholders relative to helmet policy and identify and explore their perspectives and stakes, (3) evaluate the extent to which the current policy is meeting the needs of the state, and (4) present a number of policy alternatives which may serve to improve health outcomes by reducing motorcycle fatalities in the state of Hawaii.

Chapter III: History of Motorcycle Safety Helmet Policy

Since their inception in the late 1800's, motorcycles have become a popular form of transportation and fulfil many functional needs in the U.S. and abroad. Whether used for racing spectacles, messenger service, military service, law enforcement, commuting, or as vehicles of leisure and pleasure, motorcycles have a functional role in the community. Despite the proliferation of motorcycles over the past century, legislation and policies which serve to protect motorcycle operators from injury have been largely absent until the mid-1960's, when the federal government emphasized the need for motorcycle helmet policy and encouraged states to enact such policies.

Following the federal government's initial interest and encouragement for motorcycle helmet policy in the 1960's, motorcycle helmet laws have historically been and continue to be of great debate. Complicating the already sensitive issue of motorcycle helmet policy is the involvement of government at both the federal and state level. This chapter presents the historical roles played by the federal and state governments on motorcycle helmet policy, the extent of influence exerted by both levels of government, and positive and negative effects that their legislative actions have generated.

Federal vs. State Law

Two types of law prevail in the United States: federal law and state law. Federal laws are national laws that unanimously govern the country as a whole, including all 50 states, the District of Columbia, and U.S. territories. Meanwhile, state laws are formulated based on the specific needs of an individual state and are enforceable only to people located within that state's geographic boundaries. Laws at the state level can vary greatly from one state to the next. State laws are shaped by characteristics such as the

population residing in a state and the characteristics of that population, a state's economy, a state's geographic location, the ruling religion or belief system of a state or region, the ethnic and cultural makeup of a state, and the dominant political party (Weissert & Weissert, 2012). Given the number of characteristics that may shape state law and how those vary among the states, implementing federal motorcycle helmet law has proven difficult to achieve. Considering the differences among individual states, the federal government has historically bestowed sole responsibility for the development of motorcycle safety legislation to the states. This explains the variances in motorcycle safety policy and fatalities across states and why one state's mortality rate may be significantly greater or less than another. Higher or lower mortality rates correlate to whether a state has a universal helmet mandate in place or not.

While the federal government does not create legislation around motorcycle safety helmets, that does not go to say that it cannot and does not exert a certain degree of pressure or influence to encourage states to act in ways it sees appropriate. Federal encouragement can be seen through the implementation of a crossover sanction. Crossover sanctions, as defined by Weissert and Weissert (2012), are "regulatory mechanisms that impose a financial penalty in one area based on defects in another" (p. 242). Crossover sanctions are one strategic method employed by the federal government as a means of encouraging states to adopt changes desired by the federal government. The enactment of the 1966 Highway Safety Act (80 Stat 731) is an example of such encouragement which promoted the implementation of motorcycle helmet policy across the United States.

Effects of the 1966 Highway Safety Act

The 1966 Highway Safety Act authorized the U.S. secretary of transportation to withhold up to 10% of a state's federally provisioned highway funds if a universal helmet law (UHL) was not in place (Helmet Use, 2012). Within two years of the act's enactment, 36 states had adopted UHLs, and this number grew to 47 states plus the District of Columbia by 1975 (Houston & Richardson Jr., 2007). Hawaii's response to this act was the enactment of a UHL in 1968. Prior to the passing of the 1966 Highway Safety Act, no U.S. state had enacted a mandatory helmet law requiring motorcyclists to wear safety helmets (Houston, 2007).

In 1975, as the secretary of transportation prepared to penalize California, Illinois, and Utah for their failure to adopt a universal helmet mandate for all motorcyclists, Congress intervened, eliminated the universal helmet mandate crossover sanction, and revoked the secretary's authority to withhold federal funding from states without such a law in place (Sass & Zimmerman, 2000). This change led to the repeal of UHLs in 27 states shortly thereafter (Ulmer & Preusser, 2003). Hawaii in turn repealed its mandatory helmet mandate in 1977 and has not re-instated it since.

During the brief period where Hawaii had a universal helmet law in place from 1968 and 1977, motorcycle fatalities in the state decreased by 57%. Between 1968 and 1977, the rate of motorcycle fatalities was 6 per 10,000 registered motorcycles. Prior to enactment and following the repeal of Hawaii's helmet mandate, the fatality rate was 14 per 10,000 registered motorcycles (NHTSA, 2012b). This dramatic change in fatalities which Hawaii experienced prior to and after the enactment and repeal of its helmet law is universally experienced by states as helmet mandates are enacted or repealed. Displaying

the life-saving effects that a mandatory helmet policy can have, the following presents the outcomes in four states as a result of the implementation or revocation of mandatory helmet use policy.

Effects of Repealing Helmet Mandates in the States

The effects of helmet mandates are universal throughout the U.S. When a universal helmet mandate is in place, helmet use increases while fatalities decrease. Similarly, when a universal helmet mandate is repealed, helmet use returns to lower levels while fatalities increase. Florida, Arkansas, Texas, and Louisiana are examples of states that have recently repealed motorcycle helmet laws. The following presents the adverse outcomes on motorcycle fatalities experienced in these states as a result of repealing their respective helmet laws. Also presented are the positive effects of strengthening motorcycle helmet laws.

Florida.

The state of Florida amended its motorcycle helmet policy on July 1, 2000 from one that required all motorcycle riders to wear a helmet to a variation that requires only riders less than 21 years of age or those with less than \$10,000 in medical benefits to wear a helmet. Prior to the change in law, Florida experienced motorcycle helmet use rates of nearly 100% in 1998. Following the weakening of the law to exclude riders aged 21 and above with sufficient medical insurance, motorcycle helmet use rates decreased by nearly half, with 53% of riders wearing helmets following the change (Kyrychenko & McCartt, 2006). Following the modification of Florida's motorcycle helmet policy in 2000, the number of motorcycle deaths increased by nearly 50% (Muller, 2004). While a 50% increase in death is substantial, other factors may serve to simultaneously affect

such a figure. For example, increases in the number of miles travelled by motorcycles or the number of motorcycle registrations will likely result in increased death tolls as well. Florida noticed an increase in both following the repeal of its mandatory helmet law (Muller, 2004). However, when these variations are taken in to consideration, it is estimated that 117 motorcycle fatalities would have been prevented in Florida between 2001 and 2002 if the universal helmet mandate had remained in place (NTSB, 2007).

Arkansas.

Until August 1, 1997, Arkansas required all motorcycle riders to wear safety helmets, at which point the state modified the law to require only riders less than 21 years of age to wear safety helmets. Arkansas was the first state in 14 years (after Wyoming repealed its mandatory law in favor of a law governing riders less than 18 years of age) to repeal its mandatory helmet law (Bledsoe & Li, 2005). In the first 18 months following modification of the law, Arkansas saw helmet use among motorcyclists decrease from 97% to 30%, a change of more than two-thirds (Bledsoe et al., 2002). As demonstrated in other states, a decline in helmet use has adverse effects in other areas. Following Arkansas's mandatory helmet repeal, the number of unhelmeted motorcyclists who died at the scene of an accident increased by nearly 36% while the number of nonfatal hospital admissions rose nearly 30% and consisted of greater medical severity (Bledsoe et al., 2002). Accompanying this increase in nonfatal hospital admissions is greater rates of nonreimbursement for medical care facilities, or reimbursement that is covered through federally, state, and taxpayer funded insurance programs such as Medicare and Medicaid. Bledsoe et al. (2002) estimated nearly \$1million in potential revenue was lost in Arkansas alone as a result of medical care for unhelmeted motorcycle victims during the period of

study. As was seen following Florida's mandatory helmet repeal, by the end of 1999, two years after the mandatory helmet repeal in Arkansas, the number of motorcycle registrations in Arkansas increased by more than 40% (Bledsoe & Li, 2005; Muller, 2004).

Texas.

Immediately following Arkansas, Texas in turn repealed its mandatory motorcycle helmet law on September 1, 1997 to no longer require adults aged 21 and over to wear a helmet. The adverse effects seen in Texas are no different from other states. In the year following mandatory helmet repeal, motorcycle registrations increased, the number of motorcycle fatalities increased by 30%, and helmet use among fatally injured riders decreased from 77% in 1997 to 36% in 1998 (Bavon & Standerfer, 2010). This represents the loss of an additional 80 lives two years after the repeal of mandatory helmet use compared to the two years prior (NTSB, 2007). Furthermore, among motorcycle riders sustaining nonfatal injuries following the repeal of Texas's mandatory helmet law, the number of those who sustained traumatic brain injuries increased from 55 in 1997 to 511 in 2001 (Race & Carlile, 2004, as cited in NTSB, 2007). This imposed potentially severe adverse effects on quality of life (and associated burden placed on society as a result) for many which could have been avoided had the law not been changed.

Louisiana.

Louisiana is perhaps one of the more uncommon states when it comes to motorcycle helmet policy. More often than not, once a state repeals its mandatory helmet law, opposition makes it difficult to reinstate. Louisiana, however, repealed its

mandatory law in 1999 only to re-instate it in 2004. Upon repeal of the law, Louisiana saw their near universal rate of helmet use decrease to 52% while motorcycle fatality rates far exceeded those of the national average with an increase of 75% (Ho & Haydel, 2004; NHTSA, 2003). In the four years preceding the law's reinstatement in 2004, the number of annual motorcycle registrations in Louisiana continually grew with each year exceeding the last. Two years following the law's reinstatement, the number of annual motorcycle registrations dropped by 3.8% and subsequently increased in 2006 to account for the greatest number of annual motorcycle registrations despite a helmet law being in place (NHTSA, 2008a).

Louisiana is a state of interest for several reasons. Louisiana is one of few states that have successfully re-instated a universal helmet law after repealing it, particularly in such a short time span. The gravity of this act is even greater when we consider that Louisiana is surrounded by states that had recently and successfully repealed or diminished their helmet laws (e.g., Texas, Arkansas, and nearby Florida). Speaking with regard to the effect of motorcycle helmet laws on motorcycle registrations, motorcycle registrations universally increase in light of helmet repeal. One might expect the opposite to be true, when stricter helmet laws are enacted, motorcycle registrations will go down. While Louisiana demonstrated that the re-enactment of a universal helmet law did result in a decrease in annual motorcycle registrations, the number of motorcycle registrations once again increased within two years, demonstrating that enactment of helmet laws does not necessarily lead to significant drops in registration of alternative transportation and that quick recovery is likely.

Louisiana's experience regarding motorcycle registrations before and after its motorcycle helmet law repeal is of substantial interest to Hawaii as a state that benefits from the use of alternative transportation. As Hawaii's roads and parking continue to see increased congestion, alternative means of transportation such as motorcycles are desirable as a way to reduce the number of automobiles in use. Motorcycle use also results in a smaller carbon footprint through fuel efficiency compared to most modern, non-hybrid and non-electric automobiles. The state of Hawaii has much to gain through the continued use of alternative transportation, and Louisiana serves to show that stronger helmet policy is unlikely to have a significant or lasting effect on reducing motorcycle registrations.

Helmet use before and after repeal and implementation.

Research consistently demonstrates that the repeal of universal helmet laws reduce the rate of helmet utilization while the implementation of universal helmet laws increase helmet utilization. Further, there is a direct correlation between helmet use and the rate and number of motorcycle fatalities. As helmet usage decreases fatalities increase, and as helmet usage increases fatalities decrease. This is of the utmost importance to anyone interested in reducing motorcycle mortalities. Table 1 (next page) displays the effect that weakening helmet laws have on the rate of helmet use.

As shown in table 1, all six states exemplify a dramatic decrease in helmet use following the weakening or repeal of universal helmet laws. As helmet laws weaken and the rate of helmet use declines, motorcycle fatalities consistently increase. Figure 1 displays the negative effects of helmet policy weakening as it relates to motorcycle fatalities.

Table 1 - Repealing helmet law decreases rate of helmet use (CDC, 2012)

State (Year of repeal)	Helmet use under universal law	Helmet use under partial law
Arkansas (1997)	97%	52%
Texas (1997)	97%	66%
Kentucky (1998)	96%	65%
Louisiana (1999)	100%	52%
Florida (2000)	99%	53%
Pennsylvania (2003)	82%	58%

All five states show a substantial increase in helmet use the year following implementation of a universal helmet mandate. As research has consistently identified, when helmet use increases, a reduction in fatalities is observed. Figure 2 displays the relationship between the implementation of a universal helmet mandate and the number of motorcycle fatalities that are observed.

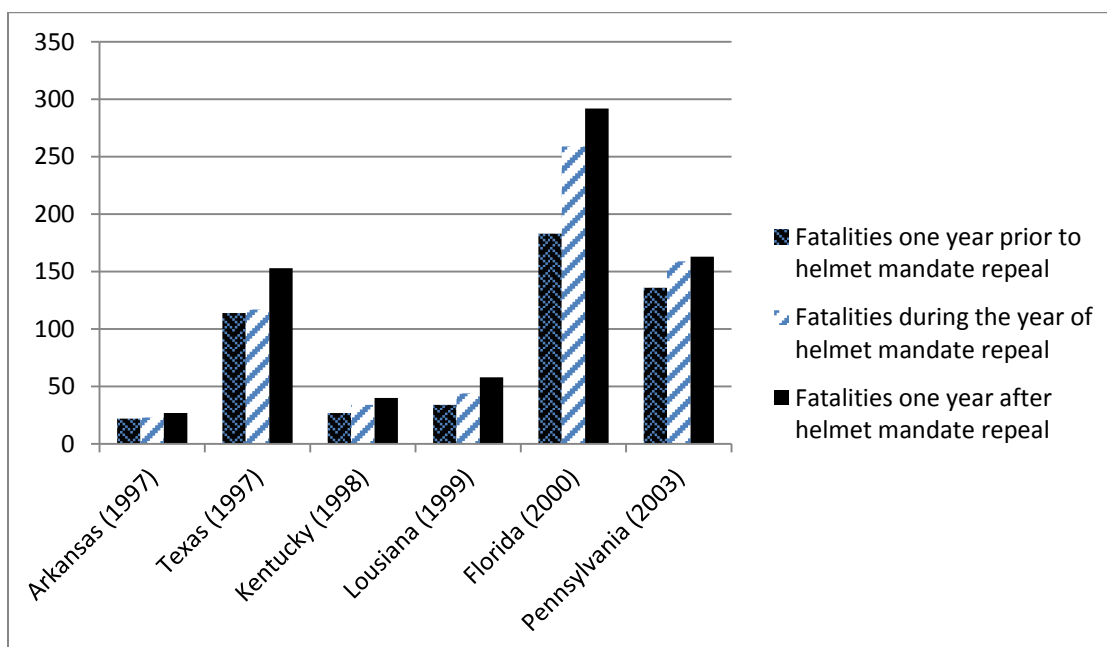


Figure 1 - Motorcycle fatalities prior to and after repeal (FARS, 2013; NHTSA, 2007)

While weakened helmet laws result in decreased helmet use and increased fatalities, these outcomes are consistently found to be reversed when stronger helmet laws are implemented. Table 2 (below) demonstrates the increase in helmet utilization following the implementation of a universal helmet mandate:

Table 2 - Implementing mandatory helmet law increases rate of helmet use (CDC, 2012)

State (Year of enactment)	Helmet use under partial/no law	Helmet use under universal law
Nebraska (1989)	15%	85%
Washington (1990)	41%	80%
California (1992)	50%	99%
Maryland (1992)	25%	81%
Louisiana (2004)	60%	99%

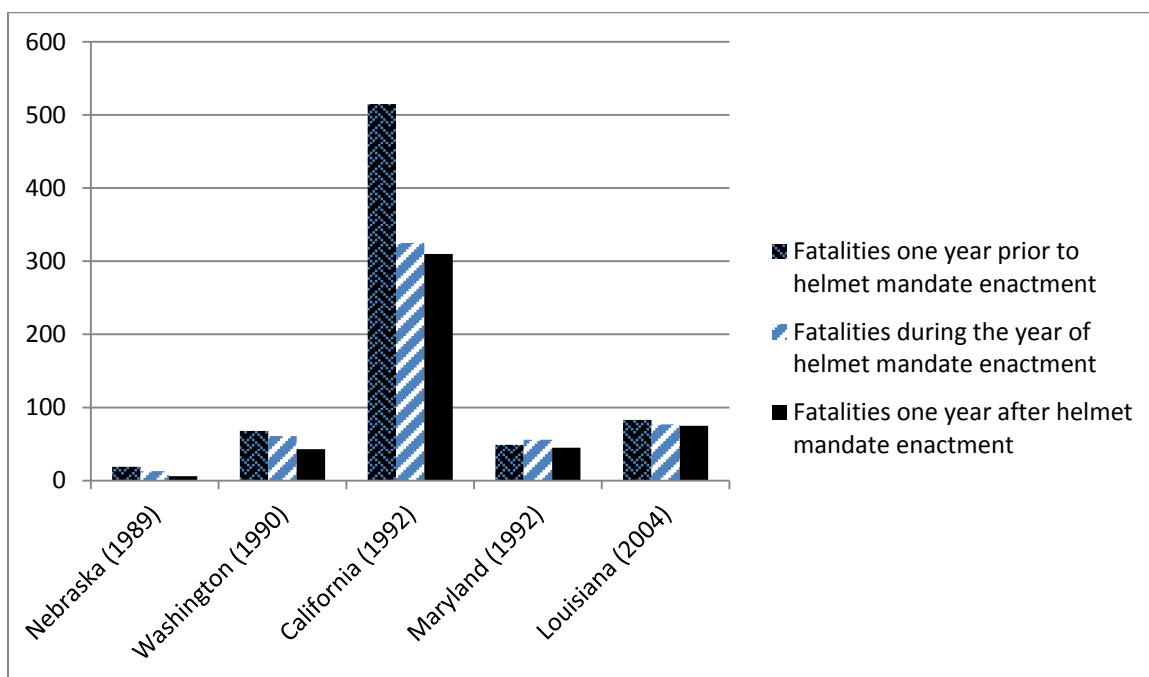


Figure 2 - Motorcycle fatalities after mandatory law implementation (FARS, 2013; NHTSA, 2007)

The above data demonstrates that implementing a helmet mandate in Hawaii is likely to increase helmet utilization amongst motorcyclists, which in turn will decrease the number of motorcycle fatalities that occur. Despite consistent findings that demonstrate the life-saving effects of helmet use and stronger helmet laws, only 19 states and the District of Columbia currently have universal helmet mandates in place. Hawaii is not one of them. Since the repeal of Hawaii’s helmet mandate in 1977, the law has not been re-instated and efforts at re-instating it have been largely unsuccessful due to strong opposition, resulting in a greater number of fatalities which could otherwise be prevented. The following section discusses the barriers to implementing stronger helmet laws in Hawaii as well as the how those opposing stronger laws are able to affect and prevent change.

Barriers to Policy Implementation

It is often the individuals who perceive themselves as the ones positioned for potential loss who are the most vocal in the legislative process. A perceived notion of loss, particularly the loss of privileges, rights, freedoms, and choice is a powerful force that serves to increase the opposition's strength in numbers. Adjacent to a growing opposition is the related political pressure that is exerted unto legislators. These two factors may often accompany each other hand-in-hand, and as they relate to motorcycle helmet legislation, have proven to be two of the greatest influences affecting legislation. The following section discusses the influence of the opposition and political pressures and their roles in shaping motorcycle helmet legislation.

The opposition.

Advocacy groups have proven effective in their ability to exert pressure on political leaders through their numbers. Motorcycle action groups come in many shapes and sizes, ranging from groups of individuals not belonging to a larger formal organization, to locally and multi-regional organizations, and topping the scale with national political action committees (PACs).

Motorcycle action groups are among the most vocal and responsive when stronger helmet policy changes are proposed. While the 1966 Highway Safety Act was successful at influencing 47 states and the District of Columbia to enact universal helmet laws, California was one of three states that failed to follow suit. By 1975, California was the only state to have not passed a mandatory helmet law of any kind. This resistance carried notoriety because California has historically been one of the most professional and innovative states with regard to its legislation and policy development (Weissert &

Weissert, 2012), and at the time California held the highest number of registered motorcyclists and highest number of motorcycle-related fatalities (Kraus, Peek, & Williams, 1995). Yet, between 1967 and 1975, eight legislative attempts were made to introduce helmet policy in California, and each one failed in large part due to the sizable vocal opposition from motorcycle groups (Jones & Bayer, 2007).

Motorcycle safety legislation in Hawaii can be seen to follow a similar path. The most recent attempt by the state of Hawaii to implement a piece of incremental motorcycle safety legislation, Senate Bill 484 (which aimed to incentivize helmet use), faced similar opposition. Present at the bill's initial hearing on February 6, 2013 to demonstrate opposition were representatives from the groups Street Bikers United, Foundation Motorcycle Club, Island Boyz Motorcycle Club, and Rough Riders Motorcycle Club. (These groups posited that incremental change today would lead to stronger, less desirable change in the future.) Meanwhile, citizen support in favor of the legislation consisted of testimony from a mere two individuals. It is often difficult to encourage citizen attendance at legislative hearings due to the customarily short notice of hearing schedules and hearing times, which may conflict with the typical citizen's busy life. Recognizing the difficulties that act as barriers to in-person testimony, testimony for proposed legislation may be submitted in advance in writing. Further emphasizing the mobilization of the perceived 'losing' opposition compared to the community as a whole, Hawaii's Senate Bill 484 received more than 500 written testimonies opposing the measure and fewer than 30 in support.

Helmet use from the opposition's perspective.

Since the dawn of widespread motorcycle helmet policy (namely the 1966 Highway Safety Act), individuals who oppose stronger helmet policy often argue that the decision to wear a helmet (or not) should be left to the individual to decide, not for the states or federal government to decide on their behalf. These individuals assume a freedom-to-choose perspective. In addition to claims that mandatory helmet requirements infringe on an individual's freedoms and liberties, the opposition against stronger helmet policy may often invoke quantitative and scientific claims, asserting that helmet use poses risk and harm to those who wear them. Since the implementation of legislative policy such as mandatory helmet use stands to affect a large segment of the population in diverse ways, it is important to consider the different perspectives held by different groups and individuals in order to formulate policy that truly serves to better the community as a whole. This section presents the perspectives and claims held by individuals who oppose mandatory helmet use policy and offers counterarguments to those claims.

Individuals and groups who advocate against strengthening helmet policy and mandatory helmet use policy often present quantitative claims that are counterintuitive to those in support of strengthening helmet legislation. The opposition to mandatory helmet policies often argue wearing a helmet increases the risk and likelihood that a motorcyclist will be injured or incur a serious accident. An example of one such claim from the opposition is that wearing a helmet increases the likelihood of spinal cord injury in the event of a crash. This argument is based on the principle that wearing a helmet increases the mass of the head and thus increases the likelihood of spinal injury in the event of a

collision due to a potential increase in the flexion/extension of the head-neck segment (Ooi, Wong, Yeap, & Umar, 2011). However frequently cited this argument may be among the opposition, medical expert testimony and scientific research repetitiously resonates there to be little to no evidence suggesting that helmet use increases the likelihood of such an injury (Cherry, 2010; Ooi et al., 2011; Orsay et al., 1994). At best, through their analysis of motorcycle crash data evaluating the relationship between helmet use and cervical spine injury, Ooi et al. (2011) found that in frontal crash instances helmet use can increase the severity of cervical spine injury, but does not increase the likelihood that one will incur spinal injury. While this particular finding may be quickly grasped by those opposing mandatory helmet legislation and used as leverage in their arguments, Ooi et al. (2011) ultimately conclude that while a helmet may increase the severity of spinal injury, an unhelmeted motorcyclist will have to trade-off with head injury in the same accident. The researchers conclude, “in motorcycle road crashes, the cervical spine can be injured in many ways. The use of helmet, influence of neck muscles, and the kinematics of motorcyclists during crash are crucial in relation to neck injury due to a road crash” (p. 618).

Opponents of mandatory helmet legislation have further challenged the benefits of helmets, claiming that helmets interfere with a motorcyclist’s vision and hearing abilities, thus increasing the risk of sustaining an accident due to forced impairment. The principles of this argument are elementary: placing a helmet on the head covers the ears (when using a standard full-face helmet) which in turn impairs hearing and simultaneously reduces a motorcyclist’s periphery vision. In response to this argument, the National Highway Traffic Safety Administration (NHTSA) sponsored a study to

evaluate the effects a helmet has on visual acuity and auditory recognition (NHTSA, 1997). In the study, fifty motorcyclists of various ages and with various experience operating motorcycles participated by having their riding habits observed while changing lanes wearing a full-face helmet, partial helmet, and no helmet. Participants were followed by researchers in another vehicle, who provided audible signals instructing participants to change lanes. Researchers varied the level of auditory signal in order to gauge a motorcyclist's response to the audible as well as monitor the degree of head turn that occurs while changing lanes with and without a helmet. The study found that while a helmet can slightly reduce the lateral vision of a rider, all but four participants compensated for this by increasing head rotation when changing lanes. Riders were also found to experience no auditory loss as a result of wearing a helmet. As a result of increased wind noise, a hearing threshold difference was identified while traveling between 30 and 50 miles per hour. In this speed threshold, all riders required a louder auditory signal regardless of the type of helmet being worn or if a helmet was worn. The NHTSA study concludes that use of a helmet neither impairs a motorcyclists hearing threshold nor restricts his or her likelihood of seeing potential obstacles.

Claims made by opponents of mandatory helmet legislation that helmets pose increased risks for motorcyclists, such as those above, are customarily cross-examined through research or experimentation and refuted. Such claims are often over-zealously stated or hold so minor a negative effect that the sole act of wearing a helmet and benefits that they provide are overwhelmingly in support of helmet use as a protective measure. Those opposing mandatory helmet use often suggest alternatives to policymakers in lieu of stronger helmet laws, such as increased training for motorcyclists or a public

awareness campaign to educate other drivers on the road to be alert and on the lookout for motorcyclists. Suggestions such as these have also been demonstrated to be ineffective as increasing the safety of motorcyclists (Lin & Kraus, 2009; Rutter & Quine, 1996). While the quantitative arguments of the opposition go beyond those presented, it is often the less-quantifiable arguments that serve to be the greatest barrier to implementing stronger helmet policy.

Libertarian and paternalistic perspectives on helmet use.

At the heart of the discussion surrounding mandatory helmet laws, policies, and legislation, are libertarian perspectives. These perspectives oppose mandatory helmet requirements on the basis that they infringe on individual liberty and freedom of choice. Unlike quantifiable arguments, libertarian arguments have long since been difficult for public health experts to overcome. As mandatory helmet laws spread across the nation in response to the 1966 Highway Safety Act, constitutional challenges to these laws were raised in 17 states, Hawaii included (*Hawaii v. Lee*, 1970). Constitutional challenges focused on two main arguments: (1) mandatory helmet laws violated the equal protection clause of the fourteenth amendment through discrimination against motorcycle riders as a class, and (2) mandatory helmet laws constituted an infringement on a motorcyclist's freedoms and liberties and were an excessive use of police power under the due process clause of the fourteenth amendment (Jones & Bayer, 2007).

Such libertarian perspectives are not dissimilar to the arguments made by tobacco smokers. Tobacco smokers also argue that their individual freedoms and rights are infringed upon as legislation or businesses impose and enforce restrictions governing where an individual can or cannot smoke, such as in restaurants, bars, near hospitals, at

places of employment, or other public places (Cherry, 2010). Similar to the U.S. federal government not passing a nationwide mandate requiring mandatory helmet use for motorcyclists, legislation on smoking bans have also been limited to state-level enactment. Where smoking bans and helmet mandates differ, however, is the evidence that allows each to be defined as a social welfare concern that is severe enough that such perceived individual liberties and freedoms are justifiably restricted for the good of the public. Tobacco use in public places subject uninvolved individuals in close proximity to smokers to the harmful effects of second hand smoke; bystanders can smell and taste second hand smoke and society has deemed it important to protect individuals from such harm. When motorcycle helmet use is discussed, there is no similar threat present to bystanders around the individual motorcyclist who chooses not to wear a helmet; the physical threat of injury is limited to the motorcyclist.

The lack of a physical threat to others around the unhelmeted motorcyclist serves a key role in reducing the involvement of the public with respect to supporting stronger motorcycle helmet legislation and the perception of a problem. This is not to suggest, however, that an individual motorcyclist who chooses not to wear a helmet is not imposing risk to others besides himself or herself. Social and economic burdens related to unhelmeted motorcycle crashes often have a ripple effect throughout the local community. Socioeconomic costs are tied to medical expenses and insurance costs; when medical expenses are funded by public insurance programs, they are distributed among taxpayers, and similarly when expenses are paid through private insurance programs they are distributed among other insured individuals in a risk pool through increased insurance premiums. Lost earnings and wages, loss of employment (which leads to unemployment

compensation, paid for by the community of taxpayers) and disability are outcomes related to unhelmeted motorcycle accidents that spill over to adversely affect the community as a whole. Equally important a socioeconomic costs, individuals who are seriously or fatally injured in unhelmeted motorcycle crashes reduce the productivity and contributions that they would have otherwise been able to offer the community, whether it be through their art, employment, ideas, services, or the simple pleasantries that is brought to a neighborhood.

It is adverse effects to the community such as these which public health officials and pro-helmet advocates use to define weak helmet laws as a public health and social problem that warrants addressing (Cherry, 2010). However, due to the indirect nature of how burdens resulting from unhelmeted motorcycle crashes affect the local community or society as a whole, awareness and concerns among the general population related to helmet use are generally minimal. This lack of vocalization has not always been the case, however. As previously mentioned, a constitutional challenge to Hawaii's mandatory helmet law was raised in 1970 under *Hawaii v. Lee* (1970). The Hawaii Supreme Court deemed the helmet mandate to be a proper exercise of police power, and the court further clarified:

The accelerating rate of deaths and injuries due to motorcycle accidents, coupled with the increase in motorcycle registrations, had reached such proportions and the class of motorcycle users had become so large and widespread that the continued viability of society required that they protect themselves from physical injury or death (1)(A)

Positive mobilization among opposition and a lack of mobilization among the general public creates a skewed perspective from which legislators draw conclusions on whether to implement a measure or not. While those opposing stronger motorcycle

helmet laws have generally proven effective in their efforts, it is important to remember that the voices which are heard in response to a legislative movement are generally not representative of society. Despite a lack of vocalization, support for mandatory motorcycle helmet use has been historically strong among the general population. According to the NHTSA's 2000 Motorcycle Vehicle Occupant Safety Survey (NHTSA, 2008, as cited in Derrick & Faucher, 2009), 83% of non-motorcyclists and 51% of motorcyclists were found to be supportive of mandatory helmet use. This support among non-motorcyclists has changed little throughout past surveys; in 1998 and 1994, 80% and 82% of non-motorcyclists surveyed were in favor of mandatory helmet use, respectively. It is therefore necessary to ensure that the general population is aware of the issues and problems related to unhelmeted motorcycle crashes and perceive the matter to be a public health and social problem necessary to address. Further, the voice and opinions of the general population should be louder and more involved in the legislative process.

Socioeconomics of Motorcycle Use in Hawaii

The use of motorcycles in the state of Hawaii brings many socioeconomic benefits, as well as risks and expenses, to the individual who chooses to use a motorcycle as well as to the state. However, a gap exists in existing literature with regard to a descriptive account of the socioeconomic impacts of motorcycle use in Hawaii. The socioeconomic effects that result from motorcycle use must be taken in to consideration when motorcycle helmet policy is being crafted, as the formulation of such policy will influence the socioeconomic gains or expenses that are realized. This section will introduce a discussion on the socioeconomics of motorcycle use in the state of Hawaii

and present the key concepts that lawmakers should incorporate in to the formation of motorcycle safety policy.

The decision to register and use a motorcycle is largely an individual decision that may often be made in the best interests of an individual. While some individuals expectedly do ride motorcycles out of sheer leisure and enjoyment, and while such an election does elicit individual and communal risks (such as risk of injury), the socioeconomics that must be considered extend beyond this. A discussion on the socioeconomics, benefits, and risks/expenses of motorcycle use must also be framed appropriately.

Pleasure and benefits.

The decision to use a motorcycle in Hawaii can be made for varying reasons. Some individuals may choose to ride a motorcycle purely for reasons of pleasure, leisure, and recreation, while others may choose the two-wheeled form of transportation for economical savings, practicality, efficiency, or any combination thereof. Whatever the primary reason(s) for operating a motorcycle may be, the argument can be made that some form of emotion and enjoyment is incorporated in to the logic.

Akin to a dog sticking his/her head out the window of a moving car, motorcycle operators can often be found reporting a similar enjoyment of feeling the wind in their face, breaking away from the enclosure of a traditional automobile, and enjoying the open road. Whether it is the breeze or fresh air, moving about the roads in a fashion that is relatively unique from the rest of society, or a sensation of freedom and adventure, there is a degree of enjoyment and pleasure behind just about every motorcyclist.

A component of enjoyment and pleasure for some individuals includes an ability to operate a motorcycle without wearing a helmet. Indeed, a policy change, which may serve to limit an individual's ability to operate a motorcycle without a helmet, will have an adverse effect on one's sense of enjoyment, which may be a foundational and necessary factor behind the decision to use a motorcycle. Through the legislative interviews that were conducted as part of this analysis, several Hawaii state lawmakers indicated 'cruising without a helmet' to be a core component behind the enjoyment of individuals who ride motorcycles in the islands. In fact, Hawaii state lawmakers posited that operating a motorcycle without a helmet is a key factor that defines many bikers and the motorcycle culture in Hawaii. Policy change that begins to encroach on an individual's ability to ride a motorcycle without a helmet will alter how some in the Hawaii motorcycle culture define themselves.

Physical and emotional health also stands to be affected by policy change, for reasons related to increased safety and a sense of decreased freedom, liberty, or enjoyment. The physical and emotional well-being of Hawaii residents are frequently greater than those of the other states, as demonstrated by Hawaii maintaining the top rank in the Gallup-Healthways Well-Being Index from 2008 to 2012. Hawaii was also recently named the healthiest state in 2013, being cited as a leader in promoting "healthy behaviors, community and environment, health policy and clinical care" (Blakely, 2013). Given the importance and visibility of these high achievements for Hawaii, it is necessary to analyze factors such as these when formulating motorcycle helmet policy, and understand how policy changes will affect the overall goals and well-being of the state.

For the individual motorcyclist, a motorcycle generates significant savings through time-saved. The rate of travel for a motorcycle is generally greater than that of an automobile or public transportation, allowing an individual to travel from door-to-door in a shorter time than would otherwise be possible (Kopp, 2011). This is due to the versatility of motorcycles to navigate on the roadway and, particularly in Hawaii, due to the ease of motorcycle parking compared to a traditional automobile. As the number of motorcycle registrations in Hawaii continues to rise, recent years have shown the abundance of motorcycle parking to be decreasing while many public and private parking garages have simultaneously abolished free motorcycle parking (“Bikers Lose”, 2009a). However, despite these changes, motorcycles continue to provide benefits to an individual in terms of parking when compared to an automobile.

Motorcycle use presents a number of economic savings to the individual and the community in Hawaii. Given the state of Hawaii generally has higher-than-average fuel prices, and considering the increased fuel efficiency of most motorcycles compared to automobiles (excluding newer electric and hybrid automobiles), the use of a motorcycle is likely to net the user a savings on fuel expenditure. The costs and fees associated to register a motorcycle on a yearly basis are also generally lower than those of an automobile. Given Hawaii’s relative lack of parking and high costs for paid automobile parking at many public and private venues, the costs to park a motorcycle are, in many cases, eliminated today or substantially decreased. Financial gains are also available through reduced maintenance expenditures and reduced insurance premiums. To the individual who relies on savings such as these in order to live about their daily life, a motorcycle may be the only feasible form of transportation when compared to the

increased costs of an automobile or decreased time savings of public transportation, walking, or bicycling.

Motorcyclists in Hawaii often report that their use of a motorcycle is in the community's interests as well and should be rewarded. Arguments for this perspective include references to motorcycles being "one less car on the road" ("Bikers Lose", 2009a) or preserving parking stalls for automobiles by parking in otherwise unused space ("Bikers Lose", 2009b). While the actual socioeconomic savings relative to these views have not been quantified in the literature, it is necessary to keep in mind that these are self-reported views from motorcyclists. Non-motorcyclists may in turn report costs relative to motorcycle use, citing examples such as disturbances to the peace (through loud motorcycles) or reduced parking availability when a motorcycle parks in a stall but could reasonably fit elsewhere ("Bikers Lose", 2009b). Benefits and costs such as these can undoubtedly be framed in a number of different lights and in turn conclude with different outcomes. To the Hawaii state lawmaker deciding whether a motorcycle is positive as 'one less car on the road' or negative through reckless operations and noise, as interviews with Hawaii lawmakers have revealed, the conclusion is likely to be resolved through an individual lawmaker's personal belief or preference.

Costs and expenses.

Motorcycle ridership is an inherently risky behavior and comes with risks and expenses related to the potential for accidental injuries and expenses related to those injuries. As exemplified through the legislative interviews that were conducted (refer to Chapter V and Appendix C), many expenses in the Hawaii community are ultimately distributed across the community rather than being contained to one individual. Put in to

perspective, the financial expenses resulting from a motorcycle accident are often distributed to the community through increased insurance premiums, increased taxes, unpaid health care services, and reduced productivity. Other adverse costs that state lawmakers should consider when creating motorcycle policy include the effects of motorcycles on the environment (e.g., the effect of pollution compared to other forms of transportation), the change in public capital through increased or decreased registration and fees, potential increases in noise levels, changes to traffic on state roadways/infrastructures, and how considerations such as these may affect the community as a whole.

An interesting approach on quantifying the economics of motorcycles is displayed through the research of Pierre Kopp (2011), a French economist at Panthe´on-Sorbonne University, Paris. Kopp performed a cost-benefit analysis of motorcycle use in Paris, France, by identifying the costs and savings associated with motorcycle use, assigning monetary values to those costs and savings, and calculating whether the costs outweigh the savings. For example, Kopp assigned a value of 15 Euros per hour to the cost of an individual's travel; a trip that requires one hour in an automobile and thirty minutes on a motorcycle would cost 60 Euros or 30 Euros, respectively, giving motorcycle use the economic advantage. Similarly, capital values were assigned on the maintenance expenses related to the use of one form of transportation over another, the cost of increased accidents, the impact to government revenue, and costs relative to pollution. Perhaps one of the greatest quantifications is placing a value on human life, which Kopp did by estimating the net wealth one might expectedly create over the course of a lifetime (which amounted to 1.5 million Euros). Kopp concludes the community of Paris benefits

by 168 million Euros annually through motorcycle use, while acknowledging despite the economic benefit, the social problem of safety and accidents remains largely unaddressed.

By operationalizing such expenses for different modes of transportation (e.g., motorcycle versus car versus TheBus), the Hawaii state lawmaker can reasonably have one methodological approach for analyzing the economics of motorcycle use in Hawaii. This primarily quantitative approach does not consider the qualitative aspects of motorcycle use in Hawaii, and the conceptualization and operationalization of the many terms, costs, and expenses can be subjective in nature and open for different interpretations, thus generating varying outcomes. Thoroughly evaluating motorcycle use in Hawaii through such a method is perhaps best reserved for completion by economists and other subject matter experts, but it should not be the only method of analysis; a multi methodological approach is necessary.

In the state of Hawaii, it is reasonable to expect some individuals will rely on motorcycles for a variety of reasons, whether for the time savings of a quicker commute, financial savings through reduced expenses, or convenience, leisure, and pleasure. Whatever the case may be, the Hawaii state lawmaker should consider these aspects while creating motorcycle helmet policy. The discussion of motorcycle safety, the benefits of, and costs of motorcycle and helmet use is subjective and often times multi-sided. For these reasons, Hawaii state lawmakers should expand the field of view when creating policy beyond the two traditional arguments of helmet policy (e.g., helmets save lives versus mandatory helmets impede on freedoms and liberties).

Chapter IV: Stakeholders

Stakeholders influence how policy is written, interpreted, who supports it, who opposes it, how much publicity a policy receives, how long or short lived a policy may be, and as a group collectively serve as policy agenda setters and policy makers. Often times, stakeholders are the individuals, groups, or organizations that have a stake, vested interest, or are affected, positively or negatively, by policy. This section will identify the stakeholders related to Hawaii's motorcycle helmet policy, present their perspectives, and present how policy affects each group.

Motorcycle helmet policies affect many sectors of the Hawaii community, directly and indirectly. For this reason, a number of stakeholders need to be involved in the formulation of motorcycle helmet policy, including:

- Motorcyclists
- Governmental organizations
- Nongovernmental organizations
- The average Hawaii citizen

The list of stakeholders involved in motorcycle helmet policy could potentially be expanded to include additional organizations and businesses that stand to be affected by the passing of policy change. Examples of such stakeholders include manufacturers of motorcycle helmets, manufacturers of motorcycles, and motorcycle dealerships.

Stakeholders such as these could potentially be affected by the passing of new helmet policy in the state. This is likely to be the case as they may see an increase or decrease in the sale of motorcycles, helmets, and related accessories, based on the policy that is enacted. However, stakeholders such as these will not be explored in detail in this policy analysis. The objectives of this analysis focus on improving the safety of and reducing

deaths among motorcyclists in the state of Hawaii. It is not an objective of this analysis to focus on the commercial business and economics of motorcycle helmet use or policy.

While factors such as these are involved in the process, the focus for this research is on health and safety, and therefore stakeholders with a primarily economic and business aspect are recognized, but not explored in depth.

Motorcyclists

Motorcyclists are individuals who are directly affected by helmet policy.

Motorcycle helmet policy governs whether or not these individuals are required to wear a helmet while operating a motorcycle, and any such a requirement instills many considerations and implications that must be addressed. The primary consideration of this stakeholder population focuses on the individual's perceived freedom or individual's right to choose whether to wear a helmet or not.

Opponents to stronger or mandatory helmet policy generally hold a belief that the decision of whether or not to wear a helmet is one that is best reserved for the individual to make. A fundamental argument among this group of stakeholders is that helmet mandates impede on personal and individual freedoms and liberties, for it is the individual motorcyclist who assumes the greatest risk of harm when a helmet is not used. The concept of individual freedom and right to choose has been firmly rooted in the motorcycle helmet policy debate for decades, and justifiably so given how deeply ingrained a sense of freedom is in American culture. While emerging research suggests the part of the brain that controls reasoning, the prefrontal cortex, does not fully develop until age 25, motorcyclists beyond this age cite an adult's ability to make sound, rational choices, to be the best determinant of helmet use. (Adding to the concept that freedom is

engrained in American culture, during interviews with Hawaii legislators it was indicated that the Hawaiian culture has a similar freedom of choice and self-governance belief incorporated into it, adding to the prominence of the argument in Hawaii.)

Motorcyclists who oppose stronger helmet policy often posit there to be a grossly inaccurate misconception among the general population and lawmakers about the abilities of helmets. This category of stakeholders argue that the general population and legislators incorrectly view motorcycle helmets as being a golden bullet or solution to motorcycle fatalities. A portion of this stakeholder group will suggest that helmet use increases the likelihood of an individual to be involved in an accident through helmet-induced hearing and/or vision impairment. Others may suggest helmets put a motorcyclist at risk for greater harm in the event of an accident.

This group of stakeholders tend to focus on the qualitative claim of an individual's freedom and right to choose whether to wear a helmet or not, and less on quantitative claims revolving around helmet safety data and statistics. While claims about helmet effectiveness can be scientifically and experimentally validated, the power of this group's claim regarding the potential loss of liberties and freedoms is a significant consideration that is difficult to argue against, cannot be disproven, and must be considered in the formulation of policy in a thoughtful and meaningful way. The views and opinions of this stakeholder group are primarily drawn through individual and group testimony that has been submitted in response to motorcycle helmet policy proposals in Hawaii.

Lawmakers

Hawaii's lawmakers, that is our elected officials (such as the governor and those who serve in the Hawaii State Senate and House of Representatives), are the gatekeepers of Hawaii's policy on motorcycle helmets. These elected officials control to a large degree what policies or measures are introduced and heard at the legislative level, which ones are dismissed, and which ones are passed in to law. While all other stakeholders play a vital role in the legislative process through the exertion of influence on how lawmakers vote, it is ultimately the responsibility of the lawmakers to pass a measure in to law.

Hawaii state lawmakers are delegated with a difficult task: shape the law in ways that best serve the state. As part of this task, lawmakers are presented with information from a variety of sources that they must consider, such as testimony in support or opposition of a measure, expert testimony and advice, statistics and data, and community feedback. Legislators must also endure political pressure generated by the media or public, which also exerts a degree of influence on decision makers.

It is often suggested that legislators vote and act in the ways that they do in order to secure re-election votes. While this may be true to an extent, interviews with Hawaii's legislators identified legislators as self-reporting a tendency to vote and act in ways that best serve their respective constituents or in ways that they personally or professionally believe to be in the best interest of their constituents. Relating to a legislator's ability to vote and act in ways that best serve constituents, a constraint is present for this group of stakeholders. The decisions of lawmakers are often limited to the information that is presented to them. This constraint includes an understanding of the needs, wants, and

perspectives of constituents. Often, the voice of constituents related to helmet policy is one-sided, drawing in much vocalization from those who oppose stronger helmet policy and little vocalization from constituents on the opposite side of the fence (for reasons that have been presented earlier). It is necessary to keep this constraint in mind when engaging this stakeholder group.

Given the degree of power, control, and information flowing from all other stakeholder groups in to this group, the inclusion of Hawaii state lawmakers in this policy analysis is vital. While a legislator's individual beliefs, attitudes, motives, and history play a role in their policymaking function, the general perspective of this stakeholder group is that they are responsible for representing the interests of their respective constituents through the enactment of policy. Interviews with Hawaii state lawmakers in this stakeholder group were obtained, and lawmaker responses were utilized to help create the policy recommendations that are presented herein. (Refer to Chapter V and Appendix C for in-depth information on these stakeholders.)

Governmental Agencies

State agencies such as Hawaii Department of Health (DOH) and Hawaii Department of Transportation (DOT) are among the most relevant agencies that must be included in the formation of and discussion about motorcycle helmet policy. The Hawaii DOH has a stake in overseeing activities that serve to prevent injury and disease, promote health and well-being, and promote healthy lifestyles. The Hawaii DOT oversees activities that occur on the state's transportation infrastructure while also serving to promote quality of life. Given the ability of helmet use to protect a motorcyclist from

incurring a traumatic brain injury and in turn help reduce fatal accidents on state roadways, it is only appropriate to expect the involvement of these agencies.

Motorcycle helmet use is a top priority for these agencies, as demonstrated by the incorporation of helmets in the Department of Health Injury Prevention Plan, 2012-2017, and the Hawaii Strategic Highway Safety Plan. These agencies are also responsible for collecting and analyzing much of the data relative to the use of motorcycle helmets, safety, and fatalities in the state of Hawaii. The Hawaii DOH and Hawaii DOT are valuable sources of information relative to the health outcomes related to motorcycle helmet use and motorcycle safety.

The DOH is an agency that is able to collect data not only first hand, but also one with the access and ability to assemble information from a variety of other stakeholders, such as health care facilities or health insurance entities, to further calculate health outcomes and impacts relative to health policy. The DOT operates in a similar capacity. These agencies provide a macro-level perspective on the outcomes related to motorcycle helmet use and provide expert opinions to legislators based on quantitative data and findings. These agencies historically support measures aimed at strengthening helmet laws, citing data on accidents, fatalities, and expenses associated with accidents. Examples of recent agency support are displayed through Hawaii DOH testimony for Senate Bill 484 in the 2013 legislative session, and a Hawaii DOT grant to Queen's Medical Center, supporting the purchase and free distribution of 150 safety helmets to local moped and motorcycle operators.

The ability of the Hawaii Department of Health and Hawaii Department of Transportation to collect and synthesize a vast amount of data in meaningful ways and

present educated opinions to lawmakers necessitates their involvement in the legislative process surrounding motorcycle helmet policy. While these agencies cannot create or strike down law, they are essential to the policy process.

Nongovernmental Organizations

Nongovernmental organizational stakeholders often take the shape of health care related entities. These are either those organizations that provide care for injured persons, or those that involve payment for the care of injured persons.

Queen's Medical Center serves as the main trauma center in the Pacific Basin and is the health care facility most likely to receive a patient involved in a motorcycle accident. Health care facilities such as Queen's experience the full gamma of medical, social, financial, and emotional effects related to motorcycle accidents. Data shows medical expenses to be greater for unhelmeted motorcycle accidents compared to accidents where the operator was wearing a helmet, and the severity of injuries and level of care necessary for unhelmeted accidents is significantly greater (CDC, 2012, "Helmet use", 2012, "Motorcycle safety", 2012). As medical expenses climb, the ability for individuals to pay for costly health care decreases. Many victims of unhelmeted motorcycle accidents are labeled "self-paid", those who are billed directly for health care charges due to a lack of insurance coverage. Of those who fall in to the category of "self-paid", millions of dollars annually are non-reimbursed, adding burden to the already costly health care system in Hawaii (testimony of Queen's Medical Center, S. 484, 2013). While health care reform has the potential to increase the ubiquity of health insurance coverage for individuals, adequate time has not yet passed to evaluate the effects health reform will have on the issue of non-reimbursement.

During interviews with Hawaii legislators, Queen's Medical Center was directly cited as a key stakeholder in the matter, as well as a source of information, data, and statistics relative to motorcycle safety and helmet use. Queen's Medical Center is a strong supporter of strengthening helmet policy in Hawaii and takes a multi-methodological approach by combining quantitative analysis of data and statistics with a qualitative approach that focuses on sharing information and connecting with the motorcyclists of Hawaii in meaningful ways that may mitigate potential accidents or fatalities. An example of Queens's support in the matter is the recent attainment of a grant from the Hawaii DOT to hold motorcycle helmet/safety presentations. These presentations focused on reaching out to young moped and motorcycle riders in order to present the benefits, real life stories, and experiences of helmet use. The presentations concluded with 150 free safety helmets being distributed to moped and motorcycle riders.

The Average Hawaii Citizen

The average, non-motorcycle operating citizen of Hawaii is a frequently under-spoken stakeholder relative to motorcycle helmet policy. The NHTSA's 2000 Motorcycle Vehicle Occupant Safety Survey consistently shows strong support for helmet use when this group is surveyed, yet this portion of the population is not observed to be making their voices and opinions heard.

Misconceptions exist about who is affected by an unhelmeted motorcycle accident. The most common misconception, which is shared equally by opponents to stronger helmet policy as well as the average citizen, is that only the fatally or seriously injured motorcycle victim is adversely harmed; it is after all this individual alone who may be losing their life. Interviews with Hawaii state legislators affirmed this

misconception to be true among the people of Hawaii. This misconception among those opposing stronger motorcycle helmet laws can be observed by reviewing testimony submitted in opposition to Senate Bill 484, introduced in the 2013 legislative session. This concept is observed by Hawaii state lawmakers who indicate that their constituents feel they are relatively or entirely unaffected by motorcycle accidents, and subsequently do not feel a need to care or have an opinion about the topic. However, the after effects of an unhelmeted crash substantially affect the average citizen of Hawaii on a number of fronts.

The financial burdens of unhelmeted motorcycle accidents are often placed upon the taxpayers. Often times, the medical bills for uninsured victims are passed on to Medicaid or the state QUEST program, which is largely taxpayer funded, and can amount to a burden of millions of dollars per year. Additionally, unemployment and disability benefits, as well as long-term care expenses, add to the burden of the average taxpayer.

The financial burdens and expenses that are placed on the average taxpaying citizen as a result of unhelmeted motorcycle accidents were generally affirmed through interviews with Hawaii state legislators. While a few interviewees felt the monetary figures involved were but a drop in the bucket when compared to the overall expenditure on health care services in Hawaii, the many of those interviewed felt the financial costs which spill over to taxpayers are an important aspect of the issue that should be considered in the policy making process.

Beyond the financial burdens that are placed on society when there is an unhelmeted motorcycle accident, perhaps most importantly is to keep in mind that victims of serious motorcycle accidents are someone's spouse, child, father, friend, or

neighbor, and the loss of one life is a loss for the community. While the consensus among lawmakers that were interviewed is that the typical Hawaii citizen does not perceive themselves to be impacted by motorcycle accidents or necessarily care whether motorcyclists use helmets, the typical citizen can be observed voicing differing opinions in light of a sensational or fatal accident. As one Hawaii lawmaker indicated, it is generally only after a sensational motorcycle fatality occurs do their constituents come forward and demand stronger motorcycle helmet laws.

Hawaii citizens are relevant stakeholders in the formation of motorcycle helmet policy. This group may be referred to as the silent majority. The views and perspectives of this group vary, ranging from a general lack of caring and extending through demands for stronger helmet laws in light of a sensational accident or death. This under spoken group should have a more prominent role in the legislative process; however, how that is best achieved has yet to be identified.

Chapter V: Legislative Interviews

In order to better understand the relationship between the predominantly mainland-based research findings and their applicability to Hawaii, interviews were sought from publically elected officials who currently serve in the Hawaii State Senate or House of Representatives. These lawmakers serve to shape Hawaii's policy and help determine what policies are passed in to law. For the purposes of exploring and understanding helmet policy in Hawaii, state lawmakers are a valuable resource that must be included in the analysis. Interviews were requested from fourteen legislators. Interviews were obtained from six legislators. Interviews were performed in January and February of 2014. The University of Hawaii Human Studies Program has reviewed and approved this study.

Selection of Interview Participants

Interviews were sought from legislators who currently serve in the Hawaii State Senate or House of Representatives. Within these two chambers of Hawaii's government, the criteria for selecting potential interview participants was constrained by limiting selection to lawmakers who serve on a health or transportation committee (there is one of each per chamber). The health and transportation committees were chosen due to their relevance to the topic of motorcycle helmet policy. These committees are among the most likely to receive a referral when a proposed helmet policy measure is introduced. Although any individual lawmaker would expectedly have an opinion on the matter and indeed be someone to vote on a helmet policy, any such policy must first pass through one or both of these committees. Therefore, individuals from these initial committees were selected for interviews.

Within these four committees, interviews were requested from fourteen legislators. Committee chairs were among the first elicited for an interview, since they are the legislators who determine whether a measure will be heard by their transportation or health committee. The profiles of the remaining members of the committees were individually reviewed and evaluated. Legislators with a history of involvement in public health policy, motorcycle or moped safety, and those with a background that could be classified as progressive or inherently unique from that of other legislators were also elicited for interviews. Those with a history of involvement in public health or motorcycle/moped safety were selected for interviews with the expectation that they would reasonably have some level of pre-existing knowledge, views, and experience on the topic to share. Those with a progressive or unique approach to policy were selected for interviews due to the expectation that they may provide information and perspectives that might not be available through the other legislators.

Senators and Representatives were initially contacted through e-mail, and those who did not respond received follow up communication by means of telephone calls to office managers and in-person visits at their respective offices at the Hawaii State Capitol. A total of six legislators participated in formal individual interviews, with four interviews taking place in-person, one interview taking place over the telephone, and one interview taking place via e-mail. Consent was obtained from all interviewees for their participation.

Interview Questions and Responses

Legislative interviews consisted of five main interview questions. Three questions contained follow up questions. This section presents the main interview questions that

were asked to interviewees and a summary of the responses. In order to preserve the anonymity of interview participants, the names of legislators who were interviewed are not used. Instead, interviewees are assigned a label of L1, L2, L3, L4, L5, L6, where each label remains with a single legislator for the duration of this analysis. Refer to Appendix A for the complete interview instrument and Appendix C for detailed legislator responses.

The following are key points that were emphasized or otherwise highlighted by Hawaii state lawmakers, and conveys how many interviewees shared same or similar thoughts, beliefs, perspectives or ideas.

Question 1

To what extent do you think a number of motorcycle fatalities occurring in Hawaii are preventable?

- Legislator had no strong comment or existing opinion, but is open to hearing the data before making a decision (L1, L2, L5)
- Legislator had a strong belief that lack of helmet use directly results in preventable and otherwise avoidable deaths (L3, L6)
- Legislator believes that deaths among motorcyclists are occurring and some can be prevented, but not specific to helmets (L4)

What are some factors that may be contributing to these fatalities?

- Drunk driving (L1, L3)
- Conditions of the road/infrastructure (L1, L2, L4)
- Distracted and inattentive drivers, e.g., using a cellphone in a car (L1, L4, L5)
- Lack of training/inexperience operating a motorcycle (L1, L3)
- Bad decisions on rider's behalf, such as lane splitting (riding between two automobiles), lane swerving, speeding (L2, L3)

- Physical characteristics of motorcycles, they are difficult to see (L2)
- Lack of helmet use (L3, L6)
- Motorcycles are inherently risky (L6)

What are some methods that may be effective at reducing the number of motorcycle fatalities?

- De-incentivizing bad behaviors through policy (L1)
- Social stigma change related to helmet use (L1)
- Public Service Announcements (PSAs) (L2)
- Incentivizing helmet use (L3)
- Improving roadway/infrastructure (L4)
- Reducing distracted driving (L4)

What sense of urgency does the issue of motorcycle fatalities have in relation to other issues in the state?

- Not an urgent issue when compared to others (L1, L2, L3, L4)
- Back seat to GMOs and minimum wage increase (L1)
- Not perceived as urgent by average citizen (L1, L2, L5)
- There is a lack of public outcry (L1, L3)

Question 2

The state of Hawaii repealed its mandatory law in 1977, which required all motorcyclists to wear helmets. Do you think this was a good decision for the state?

- Bad decision if it resulted in more deaths. Legislator indicated they would to err on side of data (L1, L2)
- Very poor decision (L3)
- Good decision, one size does not fit all (L4, L5)

- Good decision, it is what the people want (L6)

In 1970, a Hawaii court ruled the then-mandatory helmet law was necessary as a means of protecting individuals from their own negligence. How might this opinion have changed between then and now?

- Additional information necessary to form an opinion (L1)
- Hawaii is in a different time and place today, which contributes to a change in public opinion (L3, L4, L5)

Question 3

Efforts at re-instating a mandatory helmet law in Hawaii have generally been unsuccessful. What factors do you think contribute to this lack of change in Hawaii's helmet policy?

- There is a lack of outcry (L1, L2, L3)
- There is strong public opposition (L1, L2, L3, L4, L5)
- It is an emotional topic (L2, L3, L5)
- Enforcement and logistical issues prevent progress (L5)

Question 4

Legislation and policy may sometimes assume a paternalistic approach, where individuals are required to act or behave in certain ways for their own good or for the good of the community (such as seatbelt mandates or smoking bans in public places). How do you think motorcycle helmet policy relates to this approach?

- Helmet policy is not necessarily paternalistic, as there are no dangerous consequences for others (L1, L2, L3)
- Helmet policy is different from smoking policy (L2, L3)
- Agrees that a mandatory helmet law would be paternalistic (L6)

Question 5

To what extent do you think there is a representative voice from the Hawaii population relative to motorcycle helmet legislation?

- Disengagement between young people and policy (L1)

- Low voter turnout (L1)
- Interstate consistency can play a role in policy adaptation (L1)
- More voice coming from opposition than supporter of helmet laws (L2, L3, L6)
- Minimal representativeness (L3)
- Lack of voice from pro-helmet people until a sensational event occurs (L3)

The information obtained from interviews with Hawaii state legislators was primarily used to form the recommendations that are presented in Chapter VI. Beyond this use of the interview data, a primary hope is that the detailed accounts of the legislative interviews (presented at length in Appendix C) may benefit future researchers who may conduct similar research, Hawaii-based or not.

Chapter VI: Recommendations

This chapter provides Hawaii state lawmakers with recommendations that are intended to help reduce the number of motorcycle fatalities in the state and generate policy that meets the needs of Hawaii. Reductions in the number of motorcycle fatalities can be achieved through several vehicles, including changes in policy, changes in the attitudes and beliefs of motorcyclists, and greater awareness among the public of the issue.

The recommendations below are a synthesis of existing data and research relative to motorcycle safety and fatalities, the data collected through interviews with Hawaii state lawmakers, and are shaped in a way that embodies a Hawaii perspective. The intent of presenting these five recommendations is not to suggest that legislators implement or take action on all five, but rather to provide options and alternatives from which to choose from. A Hawaii legislator may find one option to be very effective at reducing fatalities, yet lack the desired political feasibility. Alternatively, another option may not necessarily serve to reduce fatalities to the same degree as another, but may hold a higher level of political feasibility. There will be tradeoffs to each recommendation that the Hawaii legislator will need to confront when deciding what the best course of action is overall.

The Best Recommendation for Hawaii

It is this researcher's expert recommendation that the efforts of Hawaii legislators will be best applied towards the formation of policy that serves to better protect younger motorcyclists while promoting the continued use and positive views of helmets among Hawaii's younger riders. It is recommended that the Hawaii State Legislature:

1. Enact a mandatory helmet policy for motorcyclists less than 25 years of age.
2. Enable financial incentives that encourage voluntary and willing use of helmets among these younger riders.
3. Initiate a steering committee that will be responsible for creating a health communication campaign in Hawaii that reinforces the benefits and importance of helmet use among younger riders.

The Hawaii legislator will find great political feasibility introducing and passing such measures because they fundamentally do not alter or directly affect the existing culture of older motorcyclists, many of whom would not favor the idea of a helmet mandate for all. The goal of this ultimate recommendation is to protect the younger riders in Hawaii while helping to ensure they maintain attitudes and beliefs about helmets as being positive accessories to motorcycle use. This recommendation is accommodating to both younger and older motorcyclists alike.

Below are five individual recommendations for Hawaii legislators to consider in greater depth. Of these five, Hawaii legislators should give attention to the following three, as they compose the key recommendation that is presented here.

- Recommendation II – Helmets for younger riders.
- Recommendation IV – Incentivize & subsidize helmets for younger riders.
- Recommendation V – Helmet information campaign.

Recommendation/Option I – Mandatory Helmet Law

The state of Hawaii should pass a legislative measure requiring all motorcyclists and motorcycle passengers to wear an approved safety helmet while operating a motorcycle on any county, city, or state roadway/infrastructure.

An approved safety helmet should be defined as, at a minimum, (1) meeting the requirements of the Federal Motor Vehicle Safety Standard 218, title 49 Code of Federal Regulations section 571.218, and (2) being worn securely on one's head and fastened with helmet or chin straps which prevent the helmet from coming off as a result of an impact.

This recommendation is the result of data surrounding the effectiveness of helmets for reducing head injury. Among all fatal motorcycle accidents reported in Hawaii between 2008 and 2012, 72% of those fatally injured riders were not wearing helmets. National data consistently demonstrates that a mandatory helmet law is effective at reducing the number of motorcycle fatalities through increased helmet use. When Hawaii previously implemented a mandatory helmet law in 1968, motorcycle fatalities decreased by 57% (from 14 fatalities per 10,000 registered motorcyclists to 6 fatalities per 10,000 registrations). Following the 1977 repeal of Hawaii's mandatory helmet law, Hawaii's fatalities once again rose. Therefore, for the purpose of reducing fatalities among Hawaii's motorcyclists, a universal helmet law in Hawaii is the best course of action state lawmakers can take.

When accepting this recommendation, the Hawaii lawmaker must remember that it will expectedly generate a wave of opposition from those individuals who perceive the use of a helmet to be a personal choice. The state lawmaker should also keep in mind that

interviews with legislators indicated that a change is on the horizon, and that is it perhaps only a matter of time until Hawaii strengthens its helmet policy, given the change in public opinion that is taking place. Adopting stronger helmet policy now may give a legislator a political advantage in the future with the younger population in Hawaii who hold evolving opinions that differ from the older generation regarding the needs of public health and safety. This constitutionality of this recommendation is also supported by the Hawaii Supreme Court decision in *Hawaii v. Lee*.

Recommendation/Option II – Helmets for Younger Riders

The state of Hawaii should pass a legislative measure requiring all motorcycle operators and passengers less than 25 years of age to wear an approved safety helmet while operating a motorcycle on any county, city, or state roadway/infrastructure.

This recommendation is presented based on local data about moped and motorcycle accidents among young operators. The Queen's Medical Center has reported that approximately 329 college-aged moped and motorcycle riders are treated in Hawaii emergency rooms each year. Among these injured young adults, 20% suffer a traumatic brain injury. Research demonstrates that the part of the brain that controls reasoning, the prefrontal cortex, does not fully develop until 25 years of age. Until a motorcyclist is capable of making an educated, informed, and rational decision on whether or not to wear a helmet, it is reasonable to require helmet use among young operators. This is the foundation for recommending mandatory helmet use for those under 25 years of age.

Since this recommendation governs only those riders less than 25 years of age, adult motorcycle operators would continue to be afforded with the personal choice to elect whether or not to wear a helmet. This recommendation is accommodating to adult

motorcyclists, and therefore may not invoke strong opposition as is traditionally seen when mandatory helmet measures are introduced. If this recommendation is accepted, it is suggested that the policy be framed and presented in a way that portrays the scientific backing behind the age specification of 25 and present the fundamental goal as one which serves to protect young riders. The perspective among older Hawaii motorcyclists is that most accidents are occurring among younger riders. Therefore, the traditional strong opposition to stronger helmet policy may be weakened with this recommendation.

If implemented, this recommendation will serve to help solidify a positive perspective relating to helmet use and the benefits of helmets among younger riders, which may carry in to adulthood. This may contribute to the next cohort of adult motorcyclists in Hawaii holding different views and opinions than are seen among the existing adult cohort. Additionally, given that younger motorcycle operators tend to be in favor of helmet use, a legislator supporting such a policy may expectedly be viewed favorably by these younger constituents and as someone that cares about the well-being of the community.

The Hawaii state lawmaker who adopts this recommendation will find political support and justification in the ruling of the Hawaii Supreme Court in the case of *Hawaii v. Lee* (1970). In his dissent, Chief Justice Richardson stated:

It is contended that the increase in fatalities and serious injuries largely to people under 25 due to motorcycle accidents is so alarming, so widespread and of such grave dimension that it threatens the very fabric of society. It would seem a necessary implication of such contention that when the physical harm to a group of people due to their own recklessness or imprudence becomes sufficiently widespread the public interest generally is affected.

If this recommendation is accepted, it is expected that the rate of helmet use among younger motorcyclists will increase while the number of fatalities decreases. The realization of these two changes may then further influence the expansion of Hawaii's helmet policy to govern a greater population in order to create more benefits (more lives saved).

Recommendation/Option III – Helmet Policy at County Level

The state of Hawaii should evaluate the needs of motorcycle helmet policy across the counties of Hawaii and enact legislation that permits motorcycle helmet policy development at the county level. This recommendation will fundamentally allow each county in the state to have a motorcycle helmet policy that best fits the needs of that county, rather than passing legislation that governs the state as a whole in the same manner. (There are four main counties of Hawaii: Hawaii County, Honolulu County, Maui County, and Kauai County. With the exception of Lanai and Molokai, which fall under Maui County, this would allow helmet policy to be set on a per-island basis.)

This recommendation is presented based on the foundation that there are many factors which contribute to motorcycle registration and use, as well as factors which contribute to motorcycle accidents and fatalities. The number of other vehicles on the roadway, the integrity of the roadway infrastructure, climate, and geography are factors that contribute to accidents and fatalities, and are all factors that may vary between counties. For example, a motorcyclist on Oahu likely rides on multi-lane interstates surrounded by many automobiles whereas a motorcyclist on the Big Island does not likely contend with such conditions, which can contribute to the likelihood of an accident.

Therefore, due to variations across counties and islands, the state of Hawaii should evaluate implementing helmet policy at the county level. If the needs of each county vary substantially, each county should be given the authority to form helmet policy that fits the needs of motorcyclists in that county.

Two of the Hawaii state lawmakers who were interviewed referenced support for helmet policy development at the county level. One interviewee, L5, felt the needs of the counties varied so drastically that it was suggested this researcher travel from Oahu to the Big Island and experience the differences first hand. The suggestion was accepted, and a weekend day was spent touring Big Island on a motorcycle. It is this researcher's expert opinion, based on the experience, that there is truth behind a degree of increased safety on this neighbor island due to a lack of vehicles on the road that may induce an accident. However, a legislator must keep in mind that an accident and fatality can be caused by many external factors beyond traffic congestion. During an interview with another Hawaii state lawmaker, L3, it was indicated that areas with "high risk geography" are conducive to motorcycle accidents, specifically citing rainstorms on Big Island. Additionally, half of all interviewees (L1, L2, and L4) cited roadway and infrastructure conditions as being conducive to motorcycle accidents. External factors such as these may vary across the counties and should be considered when evaluating this recommendation.

If this recommendation is accepted, its effectiveness at reducing the number of motorcycle fatalities in Hawaii will be constrained by the policy decisions that are made by each county. If no county in Hawaii enacts policy that is stronger than the current

state-level policy, the projected outcome is likely one that will not show a savings in lives.

Recommendation/Option IV – Incentivize & Subsidize Helmets for Younger Riders

The state of Hawaii should pass measures that encourage and support voluntary helmet use among younger motorcyclists through incentives and subsidies. Those who voluntarily choose to wear a helmet should receive discounted registration fees, discounted insurance fees, free safety inspections (requires agreement with local motorcycle inspection station), a combination of these, and/or other incentives, such as state-funded or subsidized helmets.

In addition to incentivizing helmet use through a reduction in recurring fees that are associated with motorcycle ridership, the state of Hawaii should appropriate a small portion of all motorcycle registration fees to a ‘complimentary helmet’ fund. This fund should be used to provide one free helmet to motorcycle riders less than 35 years of age who can show proof of ridership (such as vehicle registration). It is recommended that the state secure bulk or discounted helmet purchases from a local motorcycle shop to make this recommendation fiscally more viable. Individuals who choose to participate in this incentive should be provided with information that describes the benefits of wearing a helmet as a takeaway and a certificate that can be redeemed at a local motorcycle shop for a free helmet. Expert advice relative to selecting the proper size, fitment, and general safety advice should be provided at the time of certificate redemption.

Younger motorcycle riders are expected to be more receptive to financial incentives than older riders are. This is expected in part because older motorcyclists tend to have higher incomes and more stable finances than do younger adults. By providing

financial and cost saving incentives, this recommendation can help increase helmet use among younger riders, and in turn help shape and maintain positive attitudes and perspectives of helmets, which may carry over in to adulthood.

This recommendation may generate opposition from older motorcyclists who perceive helmet use to be a personal choice. An example of this opposition was recently seen with the introduction of Senate Bill 484 during Hawaii's 2013 legislative session. While SB484 promoted helmet use while retaining an individual's right to choose, it was met with opposition. In general, those who oppose stronger helmet policy in Hawaii are observed to also oppose measures that encourage helmet use. This is perhaps out of concern that any means of promoting or encouraging helmet use will ultimately lead to mandatory helmet policy. While such a concern may be true to an extent, the lawmaker adopting this recommendation should frame a measure in a way that conveys the incentivizing of helmets while not adversely affecting an individual's ability to choose whether or not to wear a helmet. Measures should be in place to limit abuse of incentives.

Recommendation/Option V – Helmet Information Campaign

The state of Hawaii should form a committee that is responsible for creating a health communication campaign that promotes helmet use among Hawaii's younger motorcyclists. Data demonstrates that younger motorcyclists tend to be supportive of helmet laws and wear helmets at higher rates than compared to older motorcyclists. The primary goal of this recommendation is to maintain the perception of helmets as positive, life saving devices among younger riders in hopes that such attitudes remain through maturity and in to adulthood. This committee will help craft the views and opinions of helmets among the state's next adult cohort of motorcyclists.

This committee should primarily be composed of stakeholders who favor helmet use among younger motorcyclists. Such stakeholders include motorcyclists less than 35 years of age, representatives from the Hawaii DOH and Hawaii DOT, representatives from Queen's Medical Center's trauma or injury prevention center, and individuals skilled in the art of creating public campaign messages on TV, radio, and in print. Additionally, given the demonstrated power of social media to reach the community, a designated social media coordinator is highly advisable to maintain a consistent and strong online message and presence.

This is a long-term recommendation that aims to promote the maintenance of positive attitudes and beliefs about helmets among younger riders. A goal of this committee should not be to target older motorcyclists or pursue stronger helmet laws. If effective, the latter will come with time as Hawaii experiences a 'run out' of the current older motorcycle rider cohort. This recommendation will help reduce the number of fatalities over time and aligns with the changing public opinion that values protecting youth.

Chapter VII: Future Scenarios

Through the implementation of policy and efforts related to motorcycle safety, the number of motorcycle fatalities that occur in the state is within our control. Based on the passage of policy or other safety-related efforts, the trend of motorcycle fatalities can be perpetuated or action can be taken to reduce the number of lives lost in the state. The following is a presentation of possible future scenarios Hawaii may experience, depending upon the course of action that is taken today.

These scenarios are forecasted with a medium frame timescale in mind that looks approximately ten years in to the future, to the year 2025. The benefits of working with scenarios of a medium term rather than short term (less than 10 years) or long term (more than 20 years) is that it permits scenarios not to be strictly limited to extrapolation of current trends (commonly found with short term projections) nor be composed of primarily unsubstantiated and vividly wild long term ‘guesses’. The following scenarios are presented to illustrate the potential impacts the choices and decisions of today may have on the near future:

- Scenario I: No changes are made. Hawaii’s current helmet policy is carried over to the year 2025 and the fatality trends of today continue.
- Scenario II: Implementation of incremental policy. Hawaii implements incremental helmet policy that governs a greater number of motorcyclists, but not all.
- Scenario III: State efforts are targeted towards the youth. Hawaii focuses its efforts at changing how younger motorcycle riders view helmets. It is the year 2025 and the new cohort of older riders support and use helmets.

- Scenario IV: Mandatory helmet policy for all. It is the year 2025 and all motorcyclists are required to wear helmets.

Scenario I: No Changes Are Made

It is the year 2025 and measures continue to be introduced on an annual basis to re-strengthen Hawaii's motorcycle helmet policy. These efforts continue to be met with fierce opposition from motorcyclists who believe it is an individual's right to choose whether to wear a helmet or not. Meanwhile, the general population of Hawaii, those who do not ride motorcycles, continue to be disengaged from the issue and perceive motorcycle helmets as a low priority for the state. Helmets continue to be required only for motorcyclists under 18 years of age.

As the state's population nears 1.6 million island residents, traffic on Hawaii's roadway infrastructure begins to resemble that of Los Angeles. A rush hour commute between downtown Honolulu and Pearl City now takes 2.5 hours due to the increase in automobiles. While Oahu is experiencing a population growth of 0.4% annually, the neighbor islands are experiencing growth rates between 1.1% (Kauai County) and 1.6% (Hawaii County), and the issue of motorcycle fatalities and safety is now a greater problem for all islands.

Hawaii continues to have the highest fuel prices in the nation. As a result, a record number of motorcycles are being registered on an annual basis as more and more people turn to the fuel efficiency, ease of parking, and quicker commutes that motorcycles are able to offer. With more than 75,000 motorcycles on the road, the number of fatal motorcycle accidents exceeds fifty per year. Among those fifty fatally injured motorcyclists, 75% occur among unhelmeted riders.

As the number of motorcycle accidents and fatalities increase, Hawaii's health care system continues to experience overcrowding of emergency room and costly

medical care. Many who have been fortunate enough to not die as a result of an accident continue to require long-term care and financial assistance as a result of their inability to work. The financial impacts of unhelmeted motorcycle accidents are starting to become noticeable to the taxpayers, however the public is more concerned with the growing number of deaths. The issue of motorcycle safety now has a place in the public's eye.

Had a mandatory helmet law been implemented in 2014, the lives of more than 250 motorcyclists would have been saved.

Scenario 2: Implementation of Incremental Policy

In 2014, the state of Hawaii implemented an incremental motorcycle helmet policy, raising the age limit for mandatory helmet use among motorcyclists from riders less than 18 years old to riders less than 25 years old. More than ten years have passed, and it is now 2025. Helmet use among young riders has reached near universal levels.

Shortly after policy implementation, the vocal opposition that initially stemmed from the older motorcyclist population quieted dramatically. These riders, who have traditionally opposed attempts at strengthening helmet laws in Hawaii, perceive the new policy not only to be non-threatening to their individual lifestyle, but in fact beneficial to protecting the lives of younger riders, who they view to be the most at-risk. Between 1997 and 2014, the percent of motorcycle fatalities occurring among motorcyclists under 25 years of age generally remained consistent, accounting for approximately 25% of all motorcycle fatalities in the state. Since the implementation of the new policy, motorcyclists under 25 years of age now account for 8% of all motorcycle fatalities in the state.

Over the course of 11 years, this incremental policy has helped saved the lives of approximately 70 motorcyclists under the age of 25 by reducing head injuries in the event of a crash. This life saving effect now creates an increasingly disproportionate statistic between fatalities among younger and older motorcyclists in Hawaii. Since 1997, motorcycle fatalities among riders 45 years of age and above have trended upwards annually, accounting for an increasing percentage of Hawaii's motorcycle fatalities.

It is expected by the year 2035 Hawaii will begin to see a decline in motorcycle fatalities among those riders 45 years and older. This marks the time where the younger cohort of motorcyclists from the mandatory helmet era will begin to transition to the older age category, bringing with them a positive perspective of helmet use. This is also the point in time where Hawaii will have an opportunity to implement a mandatory helmet law for all motorcyclists with relatively little opposition, due in part to the visible results that were achieved by the initial incremental policy and the movement of younger riders into the older age bracket, reducing vocal opposition from this traditionally loud group.

The implementation of an incremental helmet policy has proved beneficial in several ways. It has served to reduce the number of motorcycle fatalities among Hawaii's younger riders while retaining the highly demanded individual liberties for older riders to choose whether to wear a helmet or not. It has served to demonstrate the life-saving abilities of helmets to the general population and bring the topic in to focus of the public eye. Moreover, it has served to promote a positive perception of helmets among younger riders, which will continue to provide life-saving benefits as the younger cohort becomes the next generation of older motorcyclists.

Scenario 3: State Efforts Target Younger Motorcyclists

The state of Hawaii began efforts in 2014 that targeted the promotion of voluntary motorcycle helmet use among Hawaii's younger riders. It is now 2025 and through the numerous incentives and initiatives that are provided, the rate of voluntary helmet use in Hawaii among motorcyclists' less than 35 years of age is among the highest in the nation for a state without a mandatory helmet law. Younger motorcyclists are choosing to don safety helmets and, as a result, the number of fatalities in Hawaii among this age group is under control.

As Hawaii continues to see increases in population, cost of living, the number of vehicles on the road, the price of gasoline, and lack of parking (among other changes), motorcycles have continued to grow in popularity. As has historically been the case, younger individuals are often seen to select two-wheeled transportation for a combination of these reasons. Given the experienced difficulty of passing legislative measures to strengthen Hawaii's helmet policy, incentivizing helmet use and an effective media campaign have proven successful in meeting the state's objective of reducing death among younger motorcyclists.

Younger motorcycle operators have cited incentives such as reduced registration fees, free safety inspections, and additional insurance discounts as factors contributing to the choice to wear a helmet. Subsidized helmets have served to be a 'no brainer' for this younger population, whereby if they are provided for free, one would be silly not to accept and use it. Reasonably so, it is these financial incentives that appeal to younger motorcyclists. Simultaneous to Hawaii's incentives, an effective motorcycle safety

campaign has successfully instilled a positive perspective about helmet use among younger individuals through the portrayal of health benefits.

A certain stigma exists today about the use of motorcycle helmets than was present in 2014, similar to the social acceptability of driving an automobile while intoxicated. Through an aggressive media campaign portraying the health benefits of helmet use to younger riders and the detrimental effects of choosing not to wear a helmet, many younger motorcycle groups will not allow individuals to ride with them unless a helmet is used. Further, no longer does a motorcyclist appear to be 'cool' for the sake of riding a motorcycle; riding a motorcycle without a helmet invokes the opposite reaction, which has proven effective as increasing helmet use among college-aged males. The benefits of helmet use are well known.

Incentivizing helmet use and promoting social change through effective media campaigns have saved the lives of an estimated 70 motorcyclists less than 25 years of age, and has set the course for Hawaii's future as predicted by state lawmakers in 2014. It was forecasted that Hawaii's perspective of helmets would change in due time, and with a little help from the state to support good decision making among younger motorcyclists, helmets are now viewed as necessary equipment while operating a motorcycle.

Scenario 4: Mandatory Helmet Policy for all Motorcyclists

It is the year 2025, 11 years since the state of Hawaii adopted a mandatory helmet law in 2014 requiring all motorcyclists to wear an approved safety helmet. While the number of motorcycle registrations in the state decreased by 4% the year following implementation of the new policy, by 2016 the number of registered motorcycles in Hawaii rebounded, achieving an all-time high. The use of motorcycle helmets has now reached a near ubiquitous level, with exception to the more rural and remote parts of the neighbor islands, which continue to have reduced law enforcement patrolling per capita.

The year prior to the implementation of a mandatory helmet policy showed Hawaii to have a motorcycle fatality rate of 14 per 10,000 motorcycle registrations. The year following a helmet mandate implementation, Hawaii's motorcycle fatality rate decreased by 57% to 6 per 10,000 registrations. Over the past 11 years, this policy has saved the lives of an estimated 262 motorcyclists. In addition to reducing the number of motorcycle fatalities in the state, the public burden of medical care for individuals who would otherwise ride without a helmet has been reduced by approximately \$4 million per year.

The Hawaii helmet mandate of 2014 has made Hawaii the 20th state in the nation to require mandatory helmet use for all motorcyclists. While efforts to repeal the mandate are frequently made by those individuals who oppose the policy, the mandate continues to withstand the test of time, as Hawaii is unwilling to lose the actualized savings it has struggled to gain since its former mandate was repealed in 1977. Since the re-implementation of the mandate in 2014, those who oppose the mandate appear to be shrinking in size with each passing year. This is arguably so due to a run-out of the

opposition as they are replaced by a new generation of motorcyclists who were brought up under the pretense that helmets are necessary while operating a motorcycle.

Chapter VIII: Conclusion

Motorcycle helmet policy has been, and continues to be, a topic of great debate in Hawaii. Not unlike the rest of the United States, the primary force that has successfully shaped Hawaii's motorcycle helmet policy is the argument that mandating helmet use restricts individual freedoms and liberties. Despite scientific and quantifiable arguments behind the ability of helmets to reduce head injuries and in turn save lives, the opposition against helmet mandates in Hawaii continues to persevere and maintain the policy as it is today.

Through interviews with Hawaii state legislators, several key findings are identified relative to Hawaii's motorcycle helmet policy. First, public opinion in Hawaii is thought to be currently experiencing a transition from one that values and protects individual freedoms and liberties to one that is driven by public safety, communal well-being, and data. It has been postulated by Hawaii legislators that it is only a matter of time until Hawaii's policy on motorcycle helmet use is strengthened as a result. Second, Hawaii is experiencing a growing sense of responsibility to protect younger individuals from harm. The culture of Hawaii holds a strong value of caring for and protecting the keiki (kids) from undue harm. As a result, Hawaii's current motorcycle helmet policy presents an opportunity to better express that cultural value by increasing the age of mandatory motorcycle helmet use and encouraging helmet use among younger motorcyclists.

Looking beyond mandating helmet use for all motorcyclists in Hawaii, which will serve to save the most lives, the most practical and feasible recommendation that could be made to Hawaii's lawmakers at this time is to focus efforts on protecting younger

motorcyclists from serious injury. Doing so can be achieved through many innovative and creative ways, such as incentivizing or encouraging voluntary helmet use, subsidized helmets, or creating social campaigns to support or change the public's perception of motorcycle safety and helmet use.

While it is likely that Hawaii will revise and expand its current motorcycle helmet policy in due time, it is vital that legislative action be taken today in order to begin to reduce the number of motorcycle fatalities that are occurring in the state.

Appendix A – Legislative Interview Instrument

The following is the interview instrument that guided interviews with Hawaii state lawmakers.

Question 1

To what extent do you think a number of motorcycle fatalities occurring in Hawaii are preventable?

- If feeling is in agreement, follow up with:
 - What are some of the factors you think may be contributing to these avoidable or otherwise preventable deaths?
 - What are some methods you think may be effective at reducing the number of motorcycle fatalities occurring in Hawaii?
 - What sense of urgency do you think the issue of motorcycle fatalities has in relation to other issues in the state?
- If not in agreement, follow up with:
 - Can you tell me a little about why you think that to be the case?
 - What sense of urgency do you think the issue of motorcycle fatalities has in relation to other ongoing issues in the state?
 - If this is a non-urgent issue, follow-up with:
 - Can you tell me why you think motorcycle fatalities are not an emergent issue?

Question 2

The state of Hawaii repealed its mandatory law in 1977, which required all motorcyclists to wear helmets. Do you think this was a good decision for the state?

- Follow up with:
 - Can you tell me a little about why you think that to be the case?
 - In 1970, a Hawaii court ruled the then-mandatory helmet law was necessary as a means of protecting individuals from their own negligence. How might this opinion have changed between then and now?

Question 3

Efforts at re-instating a mandatory helmet law in Hawaii have generally been unsuccessful. What factors do you think contribute to this lack of change in Hawaii's helmet policy?

Question 4

Legislation and policy may sometimes assume a paternalistic approach, where individuals are required to act or behave in certain ways for their own good or for the good of the community (such as seatbelt mandates or smoking bans in public places). How do you think motorcycle helmet policy relates to this approach?

Question 5

To what extent do you think there is a representative voice from the Hawaii population relative to motorcycle helmet legislation?

- If a representative voice is lacking, follow up with:
 - Why do you think a portion of the community is not voicing their opinions/ideas/concerns?
 - In what ways can the community as a whole be encouraged to take a more active role/voice in the legislative process?
- If a representative voice is present, follow up with:
 - Can you expand on that idea and tell me why you think there is a representative voice in the legislative process?

Appendix B – Informed Consent for Interview Subjects

Informed consent was received from all Hawaii state lawmakers who agreed to be interviewed as part of this research. The following is the informed consent form that was provided to and obtained from all interviewees.

University of Hawai'i

Consent to Participate in Research Project:

*Motorcycle Fatalities in the State of Hawaii:
A Policy Analysis for State Lawmakers to Reduce Death
Among Motorcyclists Through Helmet Use*

My name is Brian Connors. I am a Master's student at the University of Hawai'i at Manoa (UH), in the Department of Communications. I am conducting a policy analysis of Hawaii's policy governing helmet use for motorcyclists. The purpose of this policy analysis is to identify actions and present recommendations that state lawmakers can take in order to reduce the number of motorcycle fatalities which occur annually in the state of Hawaii. I am asking you to participate in this project because, as a Hawaii state lawmaker, you may be able to provide insight about how motorcycle safety policy in Hawaii is shaped differently than in mainland states (which comprises most of the existing research). You also serve on at least one legislative committee that may oversee proposed motorcycle safety legislation.

What activities will you do in the study and how long will the activities last? If you participate, I will interview you once in person. The interview will last for about 45 to 60 minutes. I will record the interview using a digital audio-recorder. I am recording the interview so I can later type a written record of what we talked about during the interview. I will evaluate the information from the interview and incorporate it in to the development of my recommendations to Hawaii state lawmakers. If you participate, you will be one of a total of three state lawmakers who I will interview individually. One example of the types of questions I will ask is, "Hawaii repealed its mandatory law in 1977 which required all motorcyclists to wear helmets. Do you believe this was a good decision for the state?" If you would like to see a copy of all of the questions that I will ask you, please let me know now.

Benefits and Risks: There may be no direct benefits to you in participating in my research project. The results of this project might help me better understand the social and legislative needs in Hawaii related to policy governing motorcycle safety. Ultimately, your participation in my research will help shape my key recommendations on how Hawaii state lawmakers can help reduce motorcycle fatalities in Hawaii. I believe there is little or no risk to you in participating in this project. If you become uncomfortable or stressed by answering an interview question, we will skip the question, take a break, or stop the interview. You may also withdraw from the project altogether at any time.

Confidentiality and Privacy: I will keep all information from the interview in a safe place. Only I will have access to the information.

After I transcribe the interviews, I will destroy the audio-recording immediately. When I report the results of my research project in my typed papers, I will not use your name or any other personal information that would identify you. Instead, I will use a pseudonym

(fake name) for your name. If you would like a copy of my final report, please contact me at the number listed near the end of this consent form.

Voluntary Participation: Participation in this research project is voluntary. You are free to choose to participate or not to participate in this project. At any point during this project, you can withdraw your permission without any loss of benefits.

Questions: If you have any questions about this project, please contact me at via phone (808) 265-2156 or e-mail (bconnors@hawaii.edu). My thesis chairperson, Hanae Kramer, Ph.D., may be contacted via e-mail (hanae@hawaii.edu) with any questions.

If you have any questions about your rights in this project, you can contact the University of Hawaii, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.

Please keep the section above for your records.

If you agree to participate in this project, please sign the following signature portion of this consent form and return it to Brian Connors at the time of interview.

Tear or cut here

Signature(s) and declaration for Consent:

I agree to join in the research project entitled, *Motorcycle Fatalities in the State of Hawaii: A Policy Analysis for State Lawmakers to Reduce Death Among Motorcyclists Through Helmet Use.* I understand that I can change my mind about being in this project, at any time, by notifying the researcher.

I consent to the audio recording of the interview and understand that the recording will be destroyed immediately after it has been transcribed. (Please make one declaration below:)

I agree

I refuse

Your Name (Print): _____

Your Signature: _____

Date: _____

Appendix C – Detailed Summary of Legislative Interviews

This appendix provides detailed summaries for all legislative interviews that were completed. These summaries are not transcriptions of the interviews that took place but are intended to provide the reader with a greater degree of understanding a particular legislator's views and opinions relative to the research topic as well as how the interview was carried out. Interviewee names have been replaced with L1, L2, L3, L4, L5, or L6, and their use in these summaries is consistent with the presentation of views and opinions throughout the paper.

Since each interview with a legislator was inherently unique from the next, the formatting and presentation of each detailed summary also varies to an extent. The summaries are the researcher's synthesis of the interviews, and are presented in a conversational manner in order to preserve the tone and atmosphere of each interview.

Detailed Interview Summary for L1

Interview completed in person. Duration: 40 minutes. Audio recorded: no.

Italicized text are interviewer notes/commentary.

Question 1

L1 was hesitant/did not clearly acknowledge the extent to which they felt some of Hawaii's motorcycle fatalities to be preventable. The initial response/feedback to the topic of motorcycle fatalities in Hawaii was that there are certainly factors that contribute to fatalities, and there are certainly things that can be done to reduce fatalities. Some factors contributing to fatalities were indicated to be drunk driving, road conditions/infrastructure, inattentive drivers on the road (e.g., distracted drivers... cell phone use in a car), and lack of training [of motorcyclists]. L1 indicated a method of reducing fatalities to be reducing bad behaviors through dis-incentivizing such behaviors through policy, as demonstrated through bans on cellphone use while driving a vehicle.

L1 expanded on drunk driving, and how, through public awareness over the years, we are beginning to see improvements. They posited that there is a certain stigma today that drunk driving is not as socially acceptable as it may have been in the past, and this in turn may contribute to part of the improvement. Perhaps through greater public awareness, a similar stigma may become associated with motorcycle helmet use.

L1 believes that motorcycle fatalities are not that high on many priority lists. They explained this to be the case for a few reasons. There is no public outcry from the people about the matter, they said. Further, other 'hot topics' such as GMOs and a minimum wage increase are the current chat in the capitol and among many people. I probed why these particular items may have made it to the 'hot topic' list, and it was indicated that for

GMOs there is somewhat of a grassroots movement behind it, while minimum wage discussions may be more legislative driven (rather than grassroots). L1 did acknowledge that public outcry might expectedly be minimal until a sensational event occurs, given that the average person in the community is not directly impacted by motorcycles or policy on motorcycles/helmets to the extent a motorcyclist would be.

Question 2

L1 was initially was unsure of how to answer this question (*it appeared that they were considering a wide array of sides before making a comment*). They indicated that they were not in office at the time of the decision, and was likely not even of voting age, so it is difficult to say if the decision was a good one or not.

I shared that there are often two sides to a motorcycle helmet debate, one that argues qualitatively that helmet use should be left to individuals to decide whether to wear a helmet, and the other side being the data-driven side, citing the number of deaths before/during/after a helmet law is in place. L1 did not provide a solid response as to whether the repeal decision was a good one. They stated that they are generally data driven, and if the data/facts show that helmet laws save lives, they are likely to err in that direction. In short, they would say that it was a bad decision when considering the data, since the state generally promotes policy to protect people (e.g., seatbelt laws). It was suggested that if we require individuals to wear seatbelts in a car, we might reasonably require helmets when operating motorcycles.

L1 shared that there needs to be a balance, and to them that balance is an age limit protecting younger riders. L1 shared there is research and studies that demonstrate the adolescent mind is not fully developed and ‘adult like’ to make responsible decisions

until about age 25. Therefore, until the brain develops fully there is a need to protect young minds.

In response to the question on the former Hawaii court ruling, L1 asked if that ruling was by the Hawaii Supreme Court or a lower level court? It was indicated that if it was not the Hawaii Supreme Court, then it was likely one particular judge's opinion based on what was available to him/her and his/her thoughts on the matter. If this is the case and the ruling was not by the Hawaii Supreme Court, the strength of the ruling might not be as significant.

Question 3

Beyond what was emphasized already, L1 re-iterated the lack of public outcry on the matter. They also indicated that legislators do take constituent opinions/comments in to their policy making process and indicated political pressure from constituents is an effective way to influence policy. Enough political pressure can supersede opposition groups [to motorcycle helmet policy], they said.

Letters to the editor and calls to legislators are two cited ways of making the public's voice heard.

Question 4

L1 shared their thoughts that a paternalistic approach is often considered by evaluating to what extent your actions lead to dangerous consequences for others.

A recurring theme relating to my inquiry was the costs that motorcycle accidents/fatalities have/spread across the public. It was indicated that medical bills may be paid for by Medicaid, which is taxpayer funded, and long term care expenses are often spread across the public, too. *I questioned/requested clarification, about how significant*

such financial costs are, when put in to perspective of the amount of health care dollars flowing through the health care system in Hawaii. The response was, regardless if Hawaii's health care system is a multi-billion \$/year industry, the costs that are spread among the public are still significant and it is a factor that holds weight in the issue.

Question 5

L1 shared that there is disengagement between young people and policy. For example, voter turnout is quite low currently. *I probed for additional information on this, why this may be and what methods might improve it.* L1 responded that is a good question that does not quite have an answer. They mentioned that efforts are/have been attempted to change that, such as public awareness campaign strategies, but it continues to be a struggle to address/remedy the issue.

L1 shared that interstate consistency can also apply pressure that helps shape policy in Hawaii. They cited the example of a 'move over' law, indicating that Hawaii was the only state in the U.S. that did not have a move over law until very recently. *(A move over law is one that requires drivers to move a lane over when emergency responders, such as police, tow trucks, EMT, fire trucks, are pulled off the road, in order to give them room and safety from traffic).* Perhaps after a sensational accident in December 2012, Hawaii joined the remainder of the U.S. and adopted a move over law.

L1 also indicated that, while not a rule or consistent practice, Hawaii does seem to adopt policies from some particular states more than others. They mentioned west coast states such as Washington and California and being able to influence Hawaii policy in some situations, but this does not mean Hawaii will mirror those states; there are many

factors at play and they did not quite describe the issue of interstate pressure/influence to a substantial depth.

Detailed Interview Summary for L2

Interview completed in person. Duration: 60 minutes. Audio recorded: no.

Summary of interview

Shortly after the interview started, it became clear that the topic of motorcycle helmets was not a strong point of L2's young legislative career at this time. Further, getting direct/definitive answers to my instrument questions was difficult, as in some instances, L2 lacked the background or details to take a strong stance.

L2 considers himself/herself to be a progressive legislator, someone who is neither liberal nor conservative, but falls somewhere in-between. L2 explained their progressive nature as, on a scale of 1 to 10 (where 10 is very liberal), they would tend to float somewhere in the middle, around a 3 or so. I quickly got the sense that L2 was somewhat hesitant to state their thoughts or opinions as a legislator on this topic. When probed for thoughts/opinions as an individual, a few more opinions came out, but they, too, were somewhat limited.

L2 expressed concern for multiple sides of the argument, recognizing the importance for being presented with hard data on the side of the life-saving abilities of helmets, as well as expressing an understanding for the individual liberty side and freedom to choose.

The answers to the following questions are being filled in to the best of my ability, considering the degree of indirectness to many of the questions, likely due to their lack of specialization/focus on the topic of motorcycle safety. L2's very recent entry in to the Hawaii legislature may play a role in the responses that were provided, however it

should only be one of many factors that contribute to the responses, and by no means should be used to define their views and opinions.

In summary, my personal take from speaking with L2 is that they lean to favor an individual's right to choose and support the biker lifestyle that defines who they are, more so than mandatory helmet use which may change all of that. However, with that said, L2 remains open and receptive to arguments that are firmly rooted in data and research.

Question 1

When questioned on the matter of to what extent a number of fatalities are preventable, no explicit answer was provided.

I provided L2 with some probes and they indicated that they certainly felt there are number of factors related to motorcycle (and moped) accidents, such as bad choices on the rider's behalf (examples given: lane swerving, lane splitting). They also indicated the physical characteristics of motorcycles likely contribute to accidents, such as the difficult visibility of motorcyclists (hard for drivers to see them).

L2 mentioned the roadway/infrastructure could play a role in safety/accidents. When asked for additional details, L2 stated narrowing roadways, and went on to explain that research suggests that narrowing roadways may actually lead to more careful drivers due to drivers/riders exercising a greater degree of caution.

L2 had no comment related to a motorcyclist's riding experience and their likelihood of incurring an accident. When probed about the weather and its contribution to accidents, it was indicated that they would want to better understand the data. At the surface level, L2 indicated it makes sense if there are more opportunities to ride there are

more opportunities to have an accident. (*This was not a significant statement, brushed upon very lightly*).

L2 suggested PSAs as a way of reducing fatalities, however could not directly speak to their effectiveness.

L2 indicated there is not a sense of urgency on the matter of motorcycle fatalities, primarily because helmets do not directly impact or touch upon the lives of non-motorcyclists. L2 did not discount the importance of any issue that is resulting in deaths, however.

L2 indicated that they feel mopeds are a bigger concern, indicating that people are being allowed to operate these vehicles on public streets without registration, without safety checks, and without insurance.

Question 2

No definitive answer was provided to this question, for reasons stated earlier. L2 revolved around the need for data and research on the matter in order to address the question. (*Again, this is likely so because L2 has probably not thought about or gotten involved in the helmet debate to any large extent thus far in their political career. Many of these questions were new territory for them and 'made them think.'*)

Question 3

L2 shared that 'humans are emotional beings' and that they think emotions play a significant role in the matter of not only helmets, but policy as a whole. It was shared that they think lobbyists make powerful, compelling arguments related to the ability of an adult to make a conscious decision regarding their safety and whether or not to wear a helmet. L2 indicated that such arguments are difficult to argue against, going back to the

emotions that are at play both on the side of the lobbyists as well as on the side of policy makers.

L2 shared that compelling testimony from the other side of the table would have a dramatic effect, e.g., if a parent testified and shared a story about how their child would be alive had they worn a helmet.

Question 4

L2 shared that they believe the externalities related to helmet use are less clear/direct than those of smoking. L2 believes that the impacts to the community/uninvolved people are minimal when a rider has an accident and dies. *When probed with the idea of the financial distribution of dollars among the taxpayers, L2 felt it was likely not a significant impact for most people.*

L2 shared throughout the interview that they feel helmets are not used or are opposed for many convenience-related factors. Examples provided included the idea that helmets could be an inconvenience to carry around all the time, or to secure to the motorcycle, and were prone to possible theft. L2 raised the idea about helmets affecting style and interfering with hairstyles.

L2 repeatedly looped back to the idea that motorcyclists define themselves by a lifestyle. L2 indicated that not wearing a helmet is part of that lifestyle, and forcing people to wear helmets essentially changes your lifestyle, which is a source of opposition. It alters how bikers may define themselves.

I probed for details about what some consequences may be if such a lifestyle change were to be placed on bikers....

L2 responded that they might expect there to be a slight decrease in registration, and some unhappy individuals. No further consequences were provided.

Question 5

L2 shared that there is more voice coming from opposition than supporters [of stronger helmet laws], because helmets just are not a high priority for the majority of the people who do not ride.

Detailed Interview Summary for L3

Interview completed via phone. Duration: 40 minutes. Audio recorded: no.

Question 1

L3 is certain that Hawaii has preventable fatalities among motorcyclists. It is their opinion that we would absolutely reduce the number of motorcycle fatalities through stronger helmet laws.

L3 indicated that we should pass a mandatory helmet law because “it makes sense for people.” L3 went on to share that they are submitting a helmet-related policy in this legislative session that aims to increase helmet use among young individuals (*more on this in a following question/response*).

L3 stated that, for many people, the question of whether or not to wear a helmet is a personal question. They went on to share that while many people feel that the government is encroaching on their individual freedoms, there are reasons to implement a helmet policy. L3 stated that “we are all in this together”, and when an individual chooses to operate a motorcycle without a helmet and encounters a serious injury, the effects resulting from the crash trickle out and impact everyone around us (e.g., with the bills resulting from a crash).

L3 indicated that, over time, society does change its mind about what it feels is appropriate and necessary, and in the future people may feel a need and desire to wear helmets. However, for now that is not what the motorcycle community generally desires.

L3 indicated that if people do not want to wear helmets, we might need other options in place to encourage helmet use or offset the negative effects of an unhelmeted crash. Some suggestions L2 posed were:

- Beefier/better health insurance coverage for motorcyclists to help offset the financial costs;
- Higher insurance rates for those who choose not to wear a helmet (a suggestion to encourage helmet use);
- Lower insurance for those who choose to wear helmets (suggestion to encourage helmet use).

L3 shared that their current legislative stance is for protecting young riders. L3 feels that young people should have every opportunity to remain safe, and as with any vehicle, it can take several years to get comfortable operating said vehicle. Relative to motorcycles, these younger, and oftentimes inexperienced riders, may be more prone to accidents while comfort/experience/skills/abilities develop. It is these riders who we should take a stronger position to ensure adequate protection.

Other factors that may be contributing to fatalities?

L3 shared some concerns with speed, alcohol consumption, and length of time needed to get comfortable with operating a motorcycle. L3 re-emphasized the importance of protecting younger riders and wants to see mandatory helmet use for people up to age 21, and that these young people may ultimately be a model for others and influence the perception and desire to use helmets as time goes on.

Urgency of the issue

L3 shared that drunk driving is a bigger issue than motorcycle fatalities. This is because we have many more drunk driving fatalities than motorcycle fatalities. L3 does acknowledge part of this reason is due to the difference between the number of motorcycles on the road and the number of cars on the road.

L3 re-affirmed that almost all head injuries are preventable with helmet use and we have a direct and correlatable solution in front of us for reducing deaths.

Other ways of reducing fatalities beyond helmet use?

L3 shared ideas of reducing drunk driving (alcohol cited as a factor above in fatal crashes) and more awareness of “high risk geography,” where injuries occur as a result of weather/road conditions. L3 provided an example of heavy rainstorms on the Big Island as being conducive to promoting accidents when operating a motorcycle in such adverse weather conditions.

L3 concluded that their main desire is to see people holding an adequate desire to *want* to protect themselves, followed by use of adequate protection, followed by adequate coverage in the event of an accident.

L3 acknowledged a sense of freedom is a big part of the motorcycle culture, however once a serious traumatic brain injury (TBI) occurs, that sense of freedom is taken away as the injured person may be severely disabled and/or reliant upon others moving forward. Continuing on, L3 said that it is not only fatalities that are a problem, but other head injuries as well, such as concussions, which lead to other ongoing, long-term problems.

I probed for additional details on L3’s idea of having ‘beefier’ insurance coverage. What is the relationship between a crash and the financial expenses being dispersed among the community through taxpayer-funded programs? L3 shared that, in the grand scheme of things, while expenses related to a serious accident can get large, the numbers are relatively small when compared to the cash flowing through the health care system.

Question 2

L3 believes the repeal of the mandatory helmet law was a “very poor decision”.

Why?

As described above.

Opinion change between 1970’s and now? (answered in part above)

L3 shared that “society has a compelling interest to protect its citizens,” take seatbelts for example. As time goes on, people evolve, ideas, opinions and preferences change. Today, we are on a path where we want to protect people more than in the past.

Question 3

L3 shared that there is a very serious movement of independence and freedom at play currently. L3 appreciates an individual’s desire for and perception of their independence and right to choose, however there needs to be a balance between freedoms/choices and policy.

In the last 10 years or so there has been a serious movement of opponents who have been able to influence a small set of legislators.

Which type(s) of legislators are being targeted by opponents?

L3 described that opponents may target/work with legislators based on personal relationships that exist, and based on a legislator sharing similar beliefs such as freedom of liberty and mutually shared lifestyles. L3 emphasized that these are emotionally/personally driven factors/battles, rather than being data driven.

L3 believes there is a lack of public awareness to an extent. L3 provided an example of the MADD group, which has had decades to work on public awareness and form strength. L3 does not think the public health community has matured completely on

the issue of motorcycle helmets/safety, and as was stated earlier, the number of fatalities/serious injuries among motorcyclists are relatively small compared to other injuries/accidents, such as drunk driving.

L3's ultimate goal is to decrease TBIs. When probed whether TBI means a survivable injury or death, they stated TBI encompasses the whole spectrum of injuries from minor concussions all the way through fatalities.

Key quotes

“The nice thing is, anyone can choose to wear a helmet if they choose to.” (As highlighted above, L3 would like to see individuals having a desire to protect themselves on their own accord.)

“You only have one life, and you don't want to live it with assisted ventilation or inability to speak.”

Question 4

L3 shared that they think helmet use/motorcycle safety policy is different from policy such as smoking. L3 does not believe helmet policy to be paternalistic in nature.

L3 said that, unless people are willing to refuse or give up social assistance when injuries occur (e.g., insurance benefits to offset accident costs, disability benefits), and until society and, in particular, any/every group participates in social structures, it would be ingenuine to call any such helmet law as paternalistic.

L3 concluded that they think it is still better to provide services to injured individuals rather than disengage them from society all together as a result of making perhaps a poor decision (e.g., we should not place the full expense and burdens which result from an accident solely on the individual). L3 mentioned that they think individuals

who are self-choice conscious may say upfront they are willing to bear the blunt of the negative impacts should something happen as a result of their individual choice, however L3 doubts individuals would actually demonstrate this if and when a serious injury occurs.

Question 5

L3 feels there is very minimal representativeness from the Hawaii community. L3 said the only time they hear from the pro-helmet people is when there is a tragic injury or fatality and it hits the news; at that time, then people start coming out of the bushes asking for stronger helmet laws.

L3 repeated that the topic of motorcycle safety/helmets is not on the radar for many people until a tragedy occurs.

L3 said that, personally, they would not allow their children to get in a car without a seatbelt or operate/ride on a motorcycle without a helmet. However, L3 also acknowledges that a time will come when they [the children] will grow up, age, and be able to make a conscious decision for themselves. However, until that point comes, L3 feels the need to ensure they are safe and protected from harm such as the above examples.

As highlighted earlier, L3 repeated that, relatively speaking, the number of motorcycle fatalities are much lower in numbers than other accidents/injuries. L3 said there are simply fewer motorcycles overall, and the issue just occupies a smaller space in the cycle as a whole. The issue directly affects a smaller part of society.

How can the community as a whole be encouraged to take a more active role/voice?

L3 responded that media coverage would be necessary first before many people take interest. However, L3 stated that sometimes some issues just catch fire, and provided an example of GMO policy efforts from last year. L3 indicated that it might just take one person to be passionate about something to drive an issue into the spotlight. Concluding, L3 indicated that it might take a sensational event to gain the interest of others.

I asked how information, beyond the media, a passionate person, or a powerful person advocating, could get out and increase awareness?

L3 responded that it is often simply that passionate person that takes the issue and broadcasts it.

Lastly, is there any other information L3 would like to share with me on the topic?

L3 said that, for them, it is important to rely on data. Data is fairly cut and dry, and if the data/evidence is there, we should pass policy based on that. Otherwise, people may need to take more personal responsibility relating to the impact on society if they are entrusted with a greater degree of 'freedom.'

Detailed Interview Summary for L4

Interview completed in person. Duration: 60 minutes. Audio recorded: no.

Summary of the interview

L4 takes a strong stance on individual choice/freedom when talking about helmet use among motorcyclists. It is an individual's right to choose whether they want to wear a helmet or not, it is their life. L4 thinks the issue of motorcycle fatalities/safety is an issue worth discussing, however is often trumped by other issues that have a similar, if not greater, sense of urgency in the state.

L4 does not buy in to the 'one size fits all' model, whereby when advocates argue that 'helmets will reduce death' and place helmets on that ultimate pedestal, that just is not the case. The idea that forcing everyone to wear a helmet will lead to saving lives just is not true.

L4 thinks that motorcyclists may be getting 'picked on' unfairly, and the general public has a misconception of what helmets can/cannot/will/will not do and needs to be enlightened.

Question 1

L4 agrees that there are deaths occurring among motorcyclists in Hawaii, and some of those could certainly be prevented. L4 quickly indicated their favor for an individual to be able to choose whether to wear a helmet or not.

Factors contributing to preventable fatalities?

L4 cited a number of factors that reside outside of the motorcyclist themselves and their helmet election. L4 believes some key factors contributing to fatalities, and

factors that are within our control, include infrastructure/roadway conditions, and distraction among other motor vehicle operators on the road.

L4 expressed passion for distraction of drivers on the road as a factor relating to accidents (not only for motorcycles, but for bicyclists, too, as referenced by drivers opening their doors without looking for bicyclists). L4 believes drivers today are overly distracted and do not have enough attention dedicated to the task of operating the vehicle. This sense of distraction/inattentiveness goes beyond the use of cell phones. It goes to say that many activities lead to distracted drivers, whether it is making a phone call, texting, eating, painting nails, and so on. Many drivers are distracted by a wide array of reasons and that issue as a whole needs to be addressed, more so than the current initiatives related to solely eliminating cell phone use while driving. The issue is much larger than this, and distracted drivers as a whole are a big factor, in addition to roadways and infrastructures.

Methods for reducing fatalities?

See above. L4 indicated the need to address those things that are within our control, such as improving roadway/infrastructure conditions. I asked to what extent L4 felt this was a feasible option for Hawaii and something the state could execute, and L4 was in absolute support that improving the roadways/infrastructure is within the state's reach, and cited the state's current pothole correction progress. Additionally, greater awareness and reduced distraction among other drivers is necessary and a method that can be undertaken.

Sense of urgency

L4 indicated that while motorcycle deaths are an issue, the urgency is generally placed on many other issues which have a similar, if not greater, sense of urgency.

L4 indicated “the voice of the people [of Hawaii] is hindered by the government.” L4 provided a recent example of the special session related to same-sex marriage. L4 described how many people came to the capitol to support (or protest) the measure. They indicated that those who provided testimony to the legislators were responded to with remarks similar to ‘ok,’ or ‘thanks for sharing,’ without being given feedback that they were truly heard, that their information, thoughts, and ideas are being taken in to consideration, and they were ultimately dismissed. Similarly, L4 indicated that many people who came out to the special session had the impression that they would get to voice their thoughts/ideas to the lawmakers and be heard, but the fact of the matter is that most of them did not have the chance to make their voice heard as they had hoped.

Question 2

L4 indicated that they absolutely support the repeal of Hawaii’s mandatory helmet law. L4 stated, “one size does not fit all,” and that mandatory/universal helmet use requirements does not work for us.

L4 stated, “many riders are responsible” and deserve to be afforded with the right to choose whether they want to wear a helmet or not. L4 believes the ideology that forcing all people to wear helmets will lead to saving lives is not true. There is much more to consider beyond this, and people who place helmet use on this pedestal for being the solution to saving lives need to look further. L4 provided an example that riders may have too much bike (*more engine than they can handle*) or too little training.

Additionally, L4 highlighted that helmet use can increase the likelihood of death in instances while not providing any substantial protection or assurance that death will be prevented. L4 shared a story of two individuals on a motorcycle (operator and passenger). They were following behind a car when the car suddenly stopped. The motorcycle rider and passenger were thrown off and over the motorcycle as a result, where one individual died and the other survived with some serious injuries. L4 also provided an example of warnings printed inside helmets, such as football helmets. L4 indicated that warnings are printed inside football helmets indicating they are not going to save a life or provide any sort of protection to the wearer against head injury.

In summary, L4 did not reflect on much data or scientific evidence to support their comments. L4 provided the impression that motorcycle helmets are 'not all that' and are not the golden rule for saving lives. Rather, they infringe on individual liberties and cause more harm than they prevent.

Change in public opinion

L4 shared that the number of motorcyclists have increased since the 1970s, and the public opinion is constantly evolving and has certainly changed over the decades. L4 feels that the public opinion and demands are currently geared around having greater individual control and less governmental involvement/control on personal matters.

Question 3

This question was addressed throughout the interview

L4 feels the public is greatly misinformed about the ability of helmets and what they can do. L4 indicated that motorcyclists are quite engaged in the community and they do not fit the stereotypical 'biker gang' façade which may often be attributed to them.

Motorcyclists are contributing members of society and are more than capable of making responsible decisions on their own accord.

Question 4

L4 indicated that helmets are often viewed as a symbolic solution, when they are no such thing. L4 said it is often inattentive drivers on the road that are a key factor in the safety of motorcyclists, and this should be a factor in such safety research.

L4 spoke on smoking legislation. They shared that on the one hand government is telling people that they cannot smoke in certain places or around other people, yet on the other hand, the government is not telling them not to smoke because it [government] wants the taxes and monies that smokers generate. Related to motorcycle helmets, it is unfair to pick on motorcyclists, which L4 feels is often the case.

L4 shared that drivers in Hawaii are generally quite polite compared to mainland counterparts. L4 thinks that our polite drivers are in essence inadvertently causing accidents. L4 cited the speed of people driving, at the speed limit or below, and expecting all others to follow suite and not go any faster. In addition, L4 provided an example of only in Hawaii will drivers race to an abrupt stop at the end of a freeway onramp, causing accidents behind them. This was tied back to Hawaii's existing infrastructure and roadways. L4 also mentioned, as a way of exemplifying Hawaii's polite drivers, was a lack of honking in the islands, compared to NYC or elsewhere.

L4 went on to relate back to inattentive drivers, and cited that pedestrians are most often killed in the one place they are being herded to, the crosswalk. L4 referenced an old fashioned, but still in place at one intersection in Hawaii [*Hilo, Hawaii*], where pedestrians were (or are) expected to grab a flag as they are crossing the road and hold it

to demonstrate their presence. L4 found this particular flag method comical and thought it would serve to make them a bigger target to motor vehicle operators, similar to a bull chasing down a red flag.

Question 5

L4 thinks a representative voice is lacking in Hawaii, for many good reasons. At the heart of the matter, L4 thinks that most people are simply too busy taking care of themselves and their family to have the time to be active in the legislative process.

L4 shared that it is often an inconvenience and hassle for those who want to advocate for their right to choose when the topic of helmets come up, in part due to the convoluted nature of the legislative process and the necessity for their appearance to protect their freedoms from being stripped away.

Methods to increase representativeness/voice of community in the legislative process?

L4 shared various means of increasing the voice of the general population in the legislative process. There are letters to the editor that can be written to share an individual's thoughts, ideas, or opinions. There are talk shows that are venues for expressing opinions. There are TV outlets such as Olelo and news interviews as additional outlets.

Key quotes

“The voice of the people [of Hawaii] is hindered by the government.”

“One size does not fit all.”

Detailed Interview Summary for L5

Interview completed in person. Duration: 45 minutes. Audio recorded: no.

Summary of interview

L5 shared that the issue of motorcycle helmets has been going on and on. L5 entered with Hawaii's XXth legislature, and now that it is the 27th and they are back in, motorcycle helmets are still an ongoing issue today. L5 shared many interesting thoughts and ideas on the topic, as well as valuable information about how their constituents and district are unique in ways from Oahu and warrants different solutions for their different needs. L5 supports helmets for kids under 18. L5 supports allowing individual counties to devise helmet laws that fit the needs of their county. L5 supports a fiduciary duty to protect people from harm (such as protecting kids, protecting the head/brain when there are direct risks such as being kicked in the head, protecting the brain until it can develop).

L5 indicated their ultimate job as being to represent their constituents.

Should helmets be mandatory or not?

L5 feels that if they represented a dense urban district such as Waikiki, they might lean towards mandatory helmets, but not necessarily for rural Big Island, because Big Island is different from Oahu in many ways. Differences include rural versus urban, the amount of traffic and cars on the road, and the local culture. Because there are so many differences and different needs across the community and counties, L4 feels helmet laws are best left to the individual counties to decide what is right and proper. L5 shared that efforts to pass such a measure in the past were unsuccessful, citing enforcement as a big factor. While law enforcement may be supportive of helmets, the second breath of law

enforcement support is based on the money, expenses, and logistical difficulties which accompany such a measure, which ultimately lead to its [the county effort] demise.

A closing statement as the entire discussion came to an end was L5's thought that counties should decide on helmet laws, because what is good or necessary for Oahu may not be necessary or appropriate for Big Island.

Emotions behind individual rights

L5 affirmed the emotional aspect relative to helmet use and helmet policy is a big one. The issue persists today where individuals feel an emotion related to their individual rights, liberties and freedoms to choose whether to wear a helmet or not, how to live their lives, versus being told how to live their lives. L5 shared that people believe is it their freedom and right as a citizen to operate a motorcycle without a helmet. This, for L5, is a very strongly rooted argument that is difficult to argue against. L5 added that it is part of the Hawaiian culture for individuals to have a right to control their lives in ways they see fit (after all, most of these people are adults that are capable of making decisions). L5 said many of their constituents share this belief, that they have the right to govern their life; it's part of the culture in Hawaii that plays in to the picture. L5 provided two examples to describe this culture of Hawaii: one of whether or not an elderly individual has the right to take a pill to kill themselves after being sick of lying in a long term care bed and wanting to be done with life, and the other of a Native American telling the tribe they are going in the forest to kill themselves and the tribe saying OK. The latter demonstrates self-governance and acceptance of that right to control your life. There are different senses of individual rights among different cultures, and it is strong in Hawaiian culture that folks be able to choose and control their own lives.

Fiduciary duties and stakeholders

L5 feels that we have somewhat of an agreement/middle ground currently regarding helmet law, where motorcyclists under 18 years of age are required to wear a helmet. L5 feels that they have a fiduciary duty to protect kids under 18, because they may not make the best of decisions. L5 shared that there is research about how the brain develops, and the argument to L5 should be that if the brain isn't fully developed until 25 years old (or whatever age research shows), there should be a helmet law for everyone under 25 because it is protecting the brain until it is developed and able to make rational and adult decisions. That is L5's fiduciary duty. Similarly, L5 shared they feel helmets should be worn when individuals box or participate in Ultimate Fighting (UFC), because these individuals are taking punches/kicks directly to the head.

L5 shared that they think the time and space relative to this fiduciary duty is changing. Now that we have health care reform and more universal health care, L5 thinks helmet laws are changing to resemble a fiduciary duty where everyone should (or is expected to) protect himself or herself with adequate coverage/protection, because our expenses are becoming the responsibility of everybody, whether that be through insurance premiums, disability, or taxes. The costs are incurred by all, and in the end, the consumer pays for everything.

L5 shared the power and influence of certain stakeholder groups, specifically calling out the major biking group Street Bikers United, the insurance industry (citing HMSA as a huge lobbyist), and hospitals as being huge lobbyists.

Motorcycles, helmet, and riders on the Big Island

L5 shared several observations and thoughts about how their district(s) on the Big Island relate to motorcycles, helmet use, etc. A pedestrian observation L5 has made is that there are more and more motorcycles on the Big Island, primarily due to increased commuting. L5 indicated that commuting on the Big Island may mean being on the road for upwards of two hours, and with the high cost of fuel, motorcycles are an attractive option to people in their district(s) who commute. Importantly, L5 indicated that these motorcycle commuters on the Big Island do indeed wear helmets with great frequency (if not always).

L5 said motorcycling on the Big Island is huge. L5 said that riders flock to the island during the big national holidays (such as the 4th of July), to relax and ride their motorcycles in large groups, carefree, carefully, socially, and without helmets. When I asked why motorcyclists wear helmets during commuting but not during the big bike rides, L5 said it was due to whether a biker is 'on a mission' (such as getting to work) versus relaxing and enjoying a leisurely/social ride. When motorcyclists are commuting, 'they mean business' and need to get to work (or elsewhere), therefore they wear a helmet. However, when they are on 'relax mode,' the urgency and 'I mean business' aspect is not there, and as such the helmet goes away.

Do people really care about motorcycle safety/helmets?

L5 made the argument that most people just do not care about motorcycle safety or helmets because it does not directly affect them. Sure, motorcyclists' care, but the average citizen who does not ride a motorcycle feels relatively unaffected. As an example provided, if a car and a motorcycle have an accident, the motorcyclist is at great risk for

harm, whereas the driver in the car is relatively safe. Therefore, when an automobile driver thinks about motorcycle safety, they themselves are safe, and it is the riders who are unsafe. However, if two cars have an accident, then the drivers of automobiles are at much greater risk for personal harm, and then they care about safety when the risk of immediate harm is present. *The main argument seemed to come down to the extent to which the average Joe Shmoe feels they themselves are at risk, which will determine whether they care or not. This is a recurring theme in the interviews/literature, the general population perceives themselves as relatively unaffected outsiders relative to motorcycle safety and helmets, therefore it is not something on their minds / they do not care about.)*

L5 also alluded to the biker ‘gang’ perception, where the general public sees motorcyclists as being renegades, in big gangs, with fancy bikes, and as individuals who decide not to wear a helmet and if they want to kill themselves then so be it. L5 indicated this is the realization and this image adds to the extent that the public does not care about the issue; that is who bikers are and they are taking the risk.

A shift towards helmets / “time and space” changes

L5 thinks that as motorcycles become more prevalent on the roads because of efficiency (fuel, commuting purposes) we will see a shift towards mandatory helmet laws in due time. It is just a matter of time. This feeling that we will see a shift towards mandatory helmet laws is based on a number of factors. A key factor for this thought is the idea that there are time and space changes taking place.

The youth of today have different values and beliefs than the older generation, who have lived through transitional periods. (E.g., times when you did not and then did

need to wear helmets, did not and then did need to use seat belts, use baby seats in cars, were able to consume alcohol at 18 years and then suddenly not until 21.) For the younger generation, those who have been riding scooters/bikes/motorcycles from very young ages (10 or 11 years old), they have been wearing helmets their entire life. Helmets become a part of them and they are going to wear helmets for the rest of their lives because it is what they do. As this carries over to adulthood, we will likely see a future adult generation supporting helmets because it is how they were raised; it is what they know; it is what was instilled in them.

L5 provided the example of their child's use of a seat belt as second nature without thinking about it when getting in their truck, compared to L5's mother who may need to be reminded to put on a seatbelt.

Similar to the above, L5 indicated the parents of today have different attitudes toward safety. Parents today are teaching their kids to wear helmets and are in general more protective than parents of the L5's generation. L5 shared that when they were a kid a parent would say not to do something, such as 'don't go down that hill,' and if the kid did and got hurt, the parent's attitude was one of 'I told you not to do it...' However, going back to the concept of time and space changes, a factor to consider is that in L5's generation, kids did not have to contend with a million cars on the road or other hazards/risks that kids face today. So, while the protective nature of parents today have changed or are changing, there are external factors contributing to that change that need to be considered

As noted above, the push towards universal health care and expenses being distributed among and paid for by the consumers as a whole is an example of a time and

space change. L5 discussed the notion/attitude forming of 'doing what you need to do whether you like it or not,' which is different from attitudes of the generation(s) prior. Somewhat specific to younger generations, the information about helmets is widely available with data showing that helmets save lives. L5 said that the younger generation understands the benefits of helmets and seatbelts, and knows the laws of probability are at play regarding whether they will get in to an accident today or in the future, and as such they choose take precaution and use a helmet or seatbelt. This aids in the changing time and space as new generations take the center stage; new generations with new perspectives.

Detailed Interview Summary for L6

Interview completed via e-mail due to legislator time constraints. Due to the method of data collection for L6, the ability to probe and cover certain content was absent. The following summary is the responses that L6 provided.

Question 1

L6 shared that between 1968 to 1997 [*sic, likely typo of 1977*], when Hawaii had a universal helmet law, the number of motorcycle fatalities dropped by 57%. After 1978, the fatality rates increased. So, the use of motorcycle helmets do decrease the fatality rates. However, given the fact that motorcycles do not protect a rider from collisions, riding motorcycles will always have inherent dangers.

Question 2

L6's perspective is that the decision to wear a helmet should be left up to each individual and not for the government to decide. Based on the input we've gotten at the Legislature from motorcycle riders, they overwhelmingly support not having the law in place.

Question 3

L6 shared that one of the major issues is "homerule." A one size fits all policy determined by the state many times conflicts with the wishes of each of the counties. Also, Street Bikers Hawaii has been a very effective lobby at the Capitol.

Question 4

L6 agrees that a statewide motorcycle helmet mandate would be considered paternalistic and it should be left up to each individual to decide whether or not they want to wear a helmet.

Question 5

L6 believes it's likely that the members of our community who don't own a motorcycle would be minimally engaged in this issue. However, like L6 mentioned previously, Street Bikers Hawaii has been very active as a voice for the motorcycle owners in the state.

Appendix D – Policy Brief

The following pages of this appendix provide a policy brief that is intended to offer the reader with a summary of the key background information and convey the specific recommendations that were derived through this analysis. The brief is presented in a newsletter format and is written to a reading level that can be easily consumed by the average individual and allow them to walk away with a better understanding of the issue at hand. The brief has been formatted from the original layout in order to comply with the style guidelines and formatting requirements for this paper.

Reducing Motorcycle Fatalities in Hawaii through Policy

Motorcycle Fatalities in Hawaii Skyrocket Rate of fatalities grow in islands, eight times national average

As more residents turn to motorcycles for relief from Hawaii's growing fuel costs and traffic congestion, or for personal enjoyment, the state has seen motorcycle fatalities increase at rates that are 300% to 800% above the national average in recent years. Hawaii has averaged 29 motorcycle

fatalities annually over the last several years. Among those, more than two-thirds of the fatally injured motorcyclists were not wearing a helmet. If political action is not taken soon, in just one decade Hawaii's motorcycle fatalities are likely to exceed 50 per year.

"You only have one life, and you don't want to live it with assisted ventilation or inability to speak."

What's all the Commotion About, Anyway? The principle arguments around motorcycle helmets

The topic of motorcycle helmets and the mandating of their use is a recurring discussion at the Hawaii State Legislature, as new measures are introduced on almost an annual basis. With each effort to re-strengthen

Hawaii's helmet law, state legislators are often met by two sides: those who argue the ability of helmets to help prevent head injury and save lives, and those who argue

Helmets save lives, CDC says



A recent study released by the Centers for Disease Control and Prevention (CDC) found motorcycle helmets to be the only scientifically proven method for improving the safety of motorcycle riders. The CDC estimates that fatalities among motorcyclists can be reduced by 37% when a helmet is worn in the event of crash through the prevention of injury to the head.

Hawaii has not required all motorcyclists to wear safety helmets since the state repealed its mandatory helmet law in 1978. Prior to its repeal, Hawaii's helmet mandate effectively reduced the number of motorcycle fatalities by 57%. Currently, Hawaii requires helmet use for motorcyclists who are less than 18 years old.

state-mandated helmet use impedes on an individual's freedom and liberty.

Historically in Hawaii, it is the latter argument that has come out victorious. We set out to speak with some of Hawaii's state legislators to get the real story behind Hawaii's helmet law.

What was found reverberates the heart of the discussion. Not only do the Hawaii legislators we spoke with unanimously agree that these are the two main arguments they are presented with and must balance when making policy decisions. But, legislators themselves were found to often times weigh heavily on

one side of the table or the other.

According to one Hawaii state legislator who values the protective qualities that helmets can provide to the rider, mandating helmet use in Hawaii is appropriate and necessary, citing "you only have one life, and you don't want to live it with assisted ventilation or inability to speak." To this legislator, while they acknowledge an appreciation and understanding of the freedom and liberty position, preventing traumatic brain injuries through helmet use takes the prize.

Another Hawaii state legislator we spoke with

stood on the opposite side of the fence, sharing an opinion that 'one size does not fit all,' and that the ability of helmets to save lives is often over-exaggerated.

Many of the other Hawaii legislators we spoke with took a compromising approach, recognizing the need to balance facts and data with the demands of their constituents when evaluating policy for the best outcomes. In any event, all legislators we spoke with were interested in saving the lives of Hawaii's motorcyclists. The question then is, how do we accomplish that?

Recommendations to Hawaii State Legislators for Reducing Motorcycle Fatalities in the State

- 1. Pass a legislative measure that makes helmet use mandatory for all motorcyclists in the state. The number of lives that will be saved as a result justify the partial restriction of the individual's choice.*
- 2. Pass a legislative measure that makes helmet use mandatory for motorcyclists less than 25 years of age. The culture of Hawaii is one that protects the keiki; this recommendation will help accomplish that while preserving the ability of adults to choose whether to wear a helmet or not.*
- 3. Pass a legislative measure that allows helmet policy to be derived at the county level. Motorcycle accidents have many root causes. Traffic, adverse weather, and other hazards, can vary by island, in turn changing the helmet needs of that island/county.*
- 4. Incentivize and encourage voluntary helmet use among younger motorcyclists through financial incentives, cost saving measures, and subsidized motorcycle helmets.*
- 5. Form a committee responsible for creating a health information campaign that promotes helmet use among young motorcyclists.*

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