

## **Mandating the use of motorcycle helmets: What are the issues?**

Published: Bulletin of the American College of Surgeons, September 1, 2013

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### **Introduction**

In West Virginia, a predictable annual tradition occurs as the legislature wraps up its session: the state trauma providers receive an e-mail from their state representatives and senators asking that we weigh in on whether to continue or repeal the state's mandatory helmet law.

As medical professionals, surgeons need to play a role in public policy decisions that relate to health care, including the debate over helmet laws. In 2002, a Consortium of the American Board of Internal Medicine, The American College of Physicians, and The American Society of Internal Medicine partnered with the European Federation of Internal Medicine and developed a new Charter for Professionalism. And, while they emphasized the three fundamental principles—patient welfare, autonomy, and social justice—the authors noted that in any contract between medicine and society, physicians should provide expert advice to society on matters of health and public safety.<sup>1</sup>

West Virginia certainly has not been alone in considering whether to overturn its helmet legislation. Since the first universal helmet laws were enacted in 1967, 31 states have repealed their related laws, most recently Michigan in 2012.<sup>2</sup> Each decision to repeal a helmet law sparks political, legal, medical, and ethical debate. This article examines the data regarding the effectiveness of mandatory motorcycle helmet laws and looks at the legal and ethical concerns surrounding them.

### **Effects of helmet laws**

In a meta-analysis of the evidence-based literature, MacLeod, DiGiacomo, and Tinkoff reviewed 45 articles and noted that from a public safety perspective, helmet use in motorcycle riders reduces overall death rates, the incidence of lethal head injury, and the number of non-lethal head injuries.<sup>3</sup> The risk of morbidity and mortality of helmetless motorcycle riding provides persuasive evidence for helmet use, and the Centers for Disease Control and Prevention data concerning the cost to the general public provides support for mandatory helmet laws.<sup>4</sup> The economic cost to society is dramatic. "In 2010, approximately \$3 billion was saved as a result of helmet use in the U.S.; however, another \$1.4 billion could have been saved if all motorcyclists had worn helmets."<sup>4</sup>

The National Highway Transportation Safety Authority (NHTSA) and private institutions have conducted studies that examine crash statistics from several states demonstrating a direct correlation between a lack of helmet laws and increased incidence of traumatic brain injury (TBI) and death.<sup>5,6</sup>

Other reports from the NHTSA indicate that in states where universal helmet laws have been partially or entirely repealed, the rate of helmet use drops significantly.<sup>7</sup> For example, the helmet use compliance rate in Arkansas was 97 percent under the state's universal helmet law; it

dropped to 52 percent when the universal law was repealed and replaced with a partial law.<sup>7</sup> Similarly, when universal laws were repealed in favor of partial laws, Florida saw its compliance drop from 99 percent to 53 percent, and in Louisiana compliance went from 100 percent down to 52 percent.<sup>7</sup> Furthermore, the NHTSA found that in states with laws requiring only minors to wear helmets, less than 40 percent of underage riders who were fatally injured wore a helmet, indicating that despite a law requiring helmet use it is difficult to determine whether a rider is underage, thereby hampering enforcement.<sup>6</sup>

The drop in helmet use compliance rates has, in turn, corresponded with an increase in traumatic brain injury and death following the repeal of universal helmet laws.<sup>7</sup> In the year after the repeal of universal helmet laws, Arkansas and Texas fatalities increased by 21 percent and 31 percent, respectively, Kentucky saw a 50 percent increase in motorcyclist fatalities, and Louisiana's fatality rate increased by more than 100 percent, prompting the Louisiana legislature to reenact its universal helmet law in 2004.<sup>6,7</sup> According to estimates from the NHTSA, between 1984 and 2006, helmets saved the lives of 19,230 motorcycle riders, and if everyone killed in a motorcycle crash had worn a helmet, an additional 12,320 lives would have been saved.<sup>6</sup>

Not only have helmet laws affected injury and fatality rates, but also health care costs both for riders and for the general public, because injured riders use shared health care and insurance resources and uninsured riders often rely on public assistance programs to pay their hospital and rehabilitative care bills. Illustrative of such shared insurance burdens is the reported 34 percent increase in the average insurance payment on motorcycle injury claims in Michigan since the 2012 repeal of the state's helmet law.<sup>8</sup> Similarly, data from the U.S. Department of Transportation Crash Outcome Data Evaluation System suggest that in three states that have universal helmet laws, inpatient charges for patients with brain injury due to motorcycle crashes would have increased from \$2,325,000 to \$4,095,000 if no helmet law had existed.<sup>6</sup>

These statistics demonstrate not only the efficacy of helmet use in mitigating damages in the event of a crash, but also the direct link between the repeal of universal helmet laws and an increase in TBI, death, and use of scarce health care resources.

### **Ethical/philosophical questions**

Groups such as the American Motorcycle Association argue that “mandatory helmet laws do nothing to prevent crashes,” and are an inappropriate method of increasing safety and public awareness.<sup>9</sup> Although the prevention and reduction of injury are a primary focus of helmet use, the motorcycle helmet law debate typically raises ethical issues that extend beyond the more immediate and intended purpose of protecting the head of the rider. This section looks at the ethical and philosophical rationales that both sides in the helmet debate offer to support their positions.

### **Autonomy**

Autonomy is generally understood to mean the freedom and ability to be self-governing or to make personal decisions without undue influence or interference from others. Those individuals who act autonomously base their actions on their own values and plans.<sup>10</sup> The right to act autonomously finds support and protection in both U.S. law and basic principles of Western bioethics, and is manifest in Justice Benjamin Cardozo's statement that “every human being of

adult years and sound mind has a right to determine what shall be done with his own body; and a surgeon who performs an operation without his patient's consent commits an assault, for which he is liable."<sup>11</sup> It is important to note that Justice Cardozo did not comment on the quality of the decision itself—that is, whether it is a “good” decision or a “bad” decision—but on the individual's right to make it for him or herself.

This type of “my body, my choice” language, which is recognized and protected in the law, is most commonly associated with the abortion debate, and is not dissimilar to the arguments put forth by those who support efforts to repeal mandatory motorcycle helmet laws. Those individuals who oppose helmet laws often claim such legislation interferes with their right to choose and argue that individuals should decide what level of risk they are willing to expose themselves to while riding a motorcycle.<sup>12,13</sup> For example, commenting on the mandatory helmet law debate, A Brotherhood Against Totalitarian Enactments (ABATE) has said it does not “advocate that you ride without a helmet when the law is repealed, only that you have the right to decide.”<sup>12</sup> Of course, these autonomous decision-making rights are not absolute, and may be limited when the choice of an individual unfairly burdens others or puts them at significant risk.

### **Public health issue**

The Institute of Medicine defines public health as “what we, as a society, do collectively to assure the conditions in which people live can be healthy.”<sup>14</sup> In making claims such as “my body, my choice,” helmet law opponents imply that their actions affect no one else. Public health advocates focus on education and raising awareness, and, in general, only attempt to regulate behaviors that place other people at risk or that unfairly burden another group of individuals. Considerations of how one's actions may affect others, justice claims, are often analyzed within a public health framework. However, when the “others” are those with whom the rider is in a primary relationship, it may be more compelling to consider an “ethics of care framework,” in which motorcycle riders would have a duty to consider how their behaviors affect their loved ones and may even require riders to suppress their own desires in order to reduce harm to others, especially dependents, such as children and elderly parents.

Many proponents of mandatory motorcycle helmet laws claim that the devastating injuries helmetless riders often sustain place undue burdens on others in the form of increased insurance premiums, avoidable drains on the health care system, and the potential costs of long-term care that may entail state-supported health care services. However, in 2009, a group out of Michigan State University, East Lansing, published a study that suggests that the repeal of mandatory helmet laws may result in societal benefits.<sup>15</sup> The researchers claim that when states repeal helmet laws “organ donations due to motor vehicle accidents increase by 10 percent,” and because helmetless motorcyclists tend to be young and healthy, their organs may be more viable for transplantation.<sup>15</sup>

If the study's findings are sound and replicable, they may provide a compelling counterargument to the unfair societal burden justice claim that is so often used to support mandatory helmet laws. For patients on donor recipient waiting lists, there would be decreased wait times, decreased emotional and physical suffering for recipients and their loved ones, and decreased use of expensive life-sustaining technologies and health care resources over time.<sup>16</sup> And, although the number of organs recovered from motor vehicle accidents each year is fairly small and would

increase nationwide organ donation numbers by less than 1 percent, opponents of mandatory helmet laws could claim that the autonomous decision to ride without a helmet may provide a societal benefit that offsets the associated societal burdens.<sup>15</sup> However, such an argument would do little to justify the imposition of unnecessary burdens on the cyclist's loved ones.

### **Paternalism**

Without a compelling justice claim, pro-helmet law arguments often strike a not-so-subtle paternalistic tone. Paternalism is the “intentional limitation of the autonomy of one person by another, where the person who limits autonomy justifies the action exclusively by the goal of helping the person whose autonomy is limited.”<sup>17</sup> The claim of Jones and Bayer that “adults and adolescents need to be protected from their own poor judgment about motorcycle helmet use” is an example of a pro-helmet argument based in paternalism.<sup>12</sup> This type of “father knows best” position, when divorced from justice claims, constitutes the interference with free and autonomous choice that helmet pro-choicers rally against. Nineteenth Century philosopher John Stuart Mill argued against this type of government intrusion into personal decision making in “On Liberty”:

*The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not a sufficient warrant. He cannot rightfully be compelled to do or forebear because it will be better for him to do so, because it will make him happier, because in the opinions of others, to do so would be wise, or even right. These are good reasons for remonstrating with him. Or reasoning with him, or persuading him, or entreating him, but not for compelling him. In the part which merely concerns his independence is, of right, absolute.*<sup>18</sup>

This philosopher's timeless commentary on paternalism appears to support the “carrot” rather than the “stick” approach to matters of promoting individual health and well-being. It may be a noble endeavor to educate motorcycle riders about the dangers of riding without a helmet and to persuade or incentivize them to wear helmets through increased or decreased insurance premiums, but Mr. Mill would likely stop short of telling these riders the amount of individual risk they can choose to assume.

In a similar vein, the concept of personal responsibility is increasingly being discussed in matters involving an individual's health choices and cost to families, communities, employers, and the health care system as a whole. Employees who don't have regular physicals may pay higher insurance rates than those who do not. Some companies are now screening employees and potential employees for tobacco use, and those individuals who test positive may be offered smoking cessation therapy or face employment termination, while job seekers may be eliminated from employment consideration.<sup>19</sup> As we move toward a personal responsibility model of health care, the potential to blame and stigmatize patients who engage in behaviors of which we don't approve increases. To some degree, we already engage in this type of behavior in health care. The “drug-seeker,” “frequent flier,” “drunken rape victim,” “noncompliant diabetic,” “fat person,” and the “helmetless rider” are among those patients whom we may treat differently, negatively label, and/or blame for their own plight.<sup>20</sup> Ethics prompts us to pause for a moment of perspective-taking.

### **Conclusion**

Although the issue of helmet safety is philosophically challenging from an ethical perspective, law-based solutions appear to be less ambiguous. Despite the seemingly constant cycle of enactment and repeal in many states, universal motorcycle helmet laws can become as stable and well-accepted across the states as seat belt laws. The most critical step needed to establish and support such legislation is the reinstatement of federal funding incentives that would provide grants and/or deny federal highway funding to states that refused to enact universal helmet laws. Although the federal government does not have the authority to enact certain laws because these are powers reserved for the states, the federal government can heavily influence state-level legislation through financial “carrots.” Often, this is the only tactic that the federal government can use to influence legislation among the states. Hence, and given its overwhelming success with other regulations such as a national speed limit, mandatory vaccination requirements, and child safety seat laws, reestablishing federal funding contingencies for universal helmet laws would ensure much higher rates of enactment of comprehensive helmet laws, as witnessed with the passage of the Highway Safety Act (funding) of 1966, and would also serve to support state legislators against powerful motorcycle rights lobbies.

Although it is impossible to prevent every motorcycle crash, it is clear that universal helmet laws have a profound impact on individual safety as well as health care costs that are absorbed not only by the motorcyclist, but also the general public. Like seat belt laws, motorcycle helmet laws aim to make the roads safer for both the motorcycle rider and automobile drivers and to lower health care costs and other economic burdens that may rest on the rider, his or her family, and the state.

The second legal component needed to make helmet laws and helmet use more prevalent is a more universal acceptance (or “stick”) by the courts of the helmet defense in tort cases. A tort is a wrongful act committed by one person against another for which the victim may obtain money damages or other civil law remedies. Even in states without helmet laws for adults, motorcycle riders should be encouraged to take responsibility for their choice to ride without a helmet. Because much of the public concern regarding a motorcyclist’s failure to wear a helmet stems from the fact that public funds are often used in the rescue, care, and treatment of injured riders, it makes sense and seems fair that those who choose to ride without a helmet should be required to pay more for their health care and motor vehicle insurance, and other accident victims and their insurance companies should not be held responsible for injuries that would most likely not have occurred had the motorcyclist been wearing a helmet.

The helmet defense protects riders from being barred from the litigation, allowing a jury to find liability for the accident without considering whether the rider was wearing a helmet. However, in the determination of damages, the opposing party is protected from being required to pay increased damages to a helmetless rider whose injuries were more severe solely because he or she failed to wear a helmet. Motorcyclists should take reasonable steps to mitigate their injuries in the event of a crash. Those who oppose helmet laws imply that only the individual is penalized for failing to wear a helmet. If this is the case, then these individuals should be ordered by the court not to expect others to pay the bill for the consequences of that choice, regardless of fault in the accident.

If these two steps (the federal legislative “carrot” and a judicial “stick”) are taken to encourage helmet use among motorcyclists, state legislators will be better prepared to resist powerful lobbies and may more strongly support universal helmet laws with the same success as seat belt laws. Despite statistics that have indicated that the majority of citizens (81 percent) support universal helmet laws, legislatures still have caved under pressure from groups like ABATE. The authors of this article predict that with better federal and judicial support, motorcycle-rights lobbyists will no longer be as powerful as they have been since the 1970s, and the helmet laws will not only be more common among the states, but will result in greater compliance by motorcyclists.

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