



April 25, 2019

Senate Committee on Environment and Natural Resources - HB 2652 testimony

Good Morning Chair Dembrow, Vice-Chair Olsen, and Committee Members.

- My Name is Shawna Wellman, [REDACTED] Clackamas, OR [REDACTED].
- I represent my Family including my Father, Robert Birge, two sons and myself.
- My Family is here in support of House Bill 2652 in memory of my Mother, Sharon Birge.

OUR STORY: On July 6, 2015 our family (including my two young boys who were 8 and 6 at the time) took a commercial rafting trip down the Deschutes River in Maupin. The trip is still available on Groupon offering “3-hour rafting trips for passengers of all skill levels (to) explore 13 miles of the Deschutes river”. The trip “welcomes adventurers of all ages, carefully tailoring trips to suit skill levels. The guides provide all the necessary supplies, including life jackets, oars, paddles, dry bags, frames and ropes. Tragically, for our family there was one item that was missing from the excursion. HELMETS!!! We were going through a class 3 rapid when our raft tipped sideways. My Mom Sharon Birge was forcefully thrown into the raft and hit her head. Sharon suffered severe brain trauma from this incident and was taken to Mid-Columbia Medical center in The Dalles via ambulance. She was quickly evaluated and they found swelling and bleeding on the brain. She was then categorized as a trauma patient and life-flighted to OSHU. She was in a coma during her entire hospitalization and died 9 days later.

My Mom was in the care of Dr. Tucker at OHSU during her hospitalization. She has provided a statement that has been attached to my testimony. Dr. Tucker felt strongly that a helmet would have saved Sharon’s life. Sharon was scheduled to retire a few weeks after this excursion. She was employed for 42 years at Boeing Portland and was an active member of the safety committee. I can still hear my Mom telling me “SAFETY FIRST” in everything we did! All 5 of us would have been wearing helmets if they were available that day.

COST OF INJURIES – (Aside from loss of life) the financial cost of this trauma was over \$300,000 in medical bills at OHSU alone. This does not include the cost of ambulance transport, CT scans and care at Mid-Columbia Medical or Life-flight from The Dalles to OHSU. With this money, over 6,000 helmets could have been purchased.

CURRENT SITUATION- Helmets are always required when riding bikes for kids under the age of 18. Our family also wears helmets when we snow ski and sled. Zip line, Segway and horseback riding tours require helmets for participation year around **regardless of the temperature outside**. In many cases helmets are not being offered as an option by commercial rafting companies in the state of Oregon.

WHAT ARE WE ASKING? That all commercial rafting companies have helmets available to all participants. It’s that simple, no requirement for participants to put them on. We feel that having helmets available to participants will raise awareness for families that share our safety-first philosophy. Provide helmets and let the consumer make the choice.

WHO WILL REGULATE? The State Marine Board has already stepped up and self-identified themselves as the regulating agency in addition to life vests and other safety items on the rivers.

If one helmet can prevent a fatality, we have been successful! Thank you for the opportunity to testify before you today on HB 2652.

HELMET PROTECTION: BRAIN INJURY IN WATER SPORTS

At the intersection of medicine and sports there has been a swell of interest in recent years in sports-related concussion; it's immediate and long term effects. Traumatic Brain Injury (TBI) results in 2.2 million Emergency Department visits per year in the United States and more than 5 million Americans live today with the consequences of TBI.

The financial cost-direct and indirect-is more than \$76 billion in the U.S. but the personal and professional cost is staggering. Survivors of TBI, whether mild or severe, endure cognitive, behavioral and communication disabilities that can be lifelong.-

The percentage of persons who suffer a severe TBI (Glasgow Coma Scale < 8) who return to normal, pre-injury full functioning is.....zero.

Helmets worn in high impact sports, as well as vehicular crashes, save lives and brains. Data from the National Trauma Bank indicate that wearing a helmet in motorcycle crashes reduces the incidence of TBI overall by 65% and death by 37%.

The human brain floats in a sea of cerebral spinal fluid, suspended, and protected from impact by an outer hard skull. However, when exposed to blunt trauma or deceleration injury, the gelatinous brain forcefully strikes the inert hard skull. Shear injury, contusion, and frank hemorrhage can occur. Latent, secondary cerebral injury occurs from the brain's response to this trauma: swelling, inflammation and release of neurotoxins.

The extent of this injury can be more profound in the young, as-yet developing brain which is not fully myelinated, and thus helmet protection of our young athletes is paramount.

Most of public interest in sports-induced TBI has been focused on football, ice hockey and soccer. But there has been a substantial increase in sports-related head injury in water sports. 28,716 head injuries due to water sports were treated in US Emergency Departments in 2009, and the number is growing.

Helmets dissipate and distribute the energy a brain suffers from traumatic impact; providing an outward hard shell and an inner cushion to protect the brain from deformation as it crashes into the skull from outward impact.

Tubing, rafting and white water sports all carry an inherent risk of head injury: the head striking the water in a fall, rocks or branches in the river or unexpected accidents such as the head striking a paddle or firm side of the raft when negotiating rapids.

It is my recommendation as a Neuroscientist with expertise in the care of patients with traumatic brain injury that all participants in water sports that include a risk of sudden head trauma wear a protective helmet.

This recommendation is especially poignant for the young brain; the brain that is particularly vulnerable at a time when it is still developing and the future of its neurons and their connections are as yet unknown.

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