Effective Solutions for Improving Motorcyclist Safety

Skilled Motorcyclist Association – Responsible, Trained and Educated Riders, Inc.
2019 Lifesavers Conference

SMARTER at www.smarter-usa.org

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SMARTER

• 501c3 non-profit education association

• The one-stop spot for accessing motorcyclist safety research

• SMARTER wants motorcycle riders, motorcyclist safety advocates and policy decision makers to make responsible decisions based on factual knowledge and the conclusions of quality research, therefore, our mission is to gather, examine, catalogue, share, post and distribute motorcyclist safety factual information and research and to advocate for the use of such knowledge as the basis of decisions.
Dan

• As CEO my focus for the past decade has been to work to fulfill our mission – therefore I have a decade of experience searching for, reading, examining and categorizing every piece of research related to motorcyclist safety issues I can find.

• I am a rider since 1963, an educator, a past MSF RiderCoach and RiderCoachTrainer, contributor to MSF curriculum development and recipient of a couple national awards for contributions to motorcyclist safety.
Research Categories on our Website

Alcohol (8)

Conspicuity (16)

Crash Causation (25)
  Crash Injury Outcome (12)

Design (16) and Equipment (25)

Helmets & Helmet Laws (next)

Lane Splitting (9)

Licensing (4)

Motorist Awareness (3)

Overviews (10)

Protective Gear (9)

Rocks
  Barriers (18)
  Engineering/Infrastructure (7)

Training (8)
Research cont.

- Helmets and Helmet Laws - # 1- The only countermeasure considered scientifically proven
  - Brain and head injury (22)
  - Economic impact (24)
  - Helmet effectiveness (15)
  - Helmet law effectiveness (19) (8)
  - Helmet type and style (6)
  - Impact of repeal (11)
  - Spine injury (11)
  - Standards and testing (19)
Examining the Workshop Title
Effective Solutions for Improving Motorcyclist Safety

- Effective – causing a desired or intended result

- Solutions - the desired or intended result
  1. Reduce the number of crashes
  2. Reduce the risk of death or injury in the event of a crash
  3. Reduce the severity of injury in the event of a crash

- Effective solutions must do one or more of these three things.

- Motorcyclist Safety – excellent – our efforts are for people not machine – our work is not about motorcycle safety – I can keep my motorcycle safe by keeping it locked in the garage.
Why we care?

There is a substantial and growing contribution of motorcycle related crashes to the burden of global trauma. There is an important need to find effective ways to improve motorcycle safety.

In high income country settings the rate of death and serious injury for motorcyclists is 30–40 times that of car occupants (Johnston et al., 2008).

In low income settings road injury is a significant contributor to catastrophic household costs (Nguyen et al., 2013).

Motorcycle related trauma is a rapidly growing public health issue.
Traditional Countermeasures

Our traditional methods are not effective - i.e. reduce crashes, reduce death or injury in the event of a crash, reduce severity of injuries.

- Rider training
- Motorist awareness
- Licensing and endorsement

Let’s look at these 3 in a bit more detail
Rider Training

• The main focus of current rider training programs is on the physical skills operation skills. The research on current training is inconclusive at best and at worst indicates trained riders have an elevated risk of crashing or an increased likelihood of exhibiting risky riding behavior.

• Training is very effective at teaching skills that make us more skillful riders but there is no indication that better skills make us safer.

• Consistent with literature regarding driver training
Motorist Awareness
“Look Twice to Save a Life”

• No research and no data to indicate any effectiveness

• Drivers remember the signs but there is no indication remembering the signs changes behavior

• Such programs were logical in 1981 when HH Hurt identified the problem of drivers looking but not seeing but this approach is antiquated and long outdated – *does not account for what we have know for more than two decades about how our eyes and mind work together to “see”*
Licensing or Endorsement

• We know that unlicensed or unendorsed riders are overrepresented in the crash and fatality data. However, that doesn’t mean that the licensing process actually prevents reduces crash risk. The licensing process is skill based – requiring a rider to demonstrate riding skills and/or having successfully completed a training course.

• The correlation (between endorsement and crash/fatality more likely demonstrates that the licensing process is not undertaken by riders who make less than responsible decisions.

• Irresponsible behaviors such as speeding, drinking, not wearing a helmet and not being licensed are overrepresented in the crash data. Speeding and drinking are likely factors that contribute to crashing. Not wearing a helmet and not having an endorsement are “ride along” irresponsible behaviors.
Possible Fixes – Rider Training

How could training be improved to become effective?

Less emphasis on skill and more on:

- Hazard perception
- Situational awareness
- Attitudes to risk-taking
- Judgment
- Responsibility
- Decision making

Progression to on-road riding and developing road craft (riding in traffic) skills through on-road experience

Training through extended mentoring (RideSafeUS) vs. short term courses

(Slide 15 – what works)
Possible Fixes – Motorist Awareness

● Teach drivers a new method of looking – a specific way to search for vulnerable road users that addresses the available research about Looked But Failed to See – Right of Way Violation (LBFTS ROWV) crashes and what we know about how our eyes and mind work together to “perceive.” SMARTER has developed a proposed system.

● Extremely focus/targeted efforts at identified locations or populations
Possible Fixes
Licensing and Endorsements

Graduated, tiered or combo systems that are focused on responsibility and experience vs. skill.

**Graduated licensing:** are designed to provide new riders with driving experience and skills gradually over time in low-risk environments. There are typically three steps or stages through which new drivers pass.

**Tiered licensing:** requires beginner riders to ride machines with restricted horsepower/cc levels.
Based on the research available what works?

(1) No single measure

(2) Comprehensive programs – leave no stone unturned

(3) We likely should be talking about systems approaches – not single isolated measures

(4) Systems approaches to road safety. Shift the focus away from a focus on road user behavior to modification of the system from multiple perspectives, including roads and roadsides, vehicles, speed and road users.
Countermeasures that Work

- A strong government role in setting legislation and policy enforcement
- Strong police enforcement - alcohol, speeding, helmet use
- Improving post-crash response
- Graduated/tiered licensing
- Conspicuity enhancement for rider and machine – unique frontal lighting
- Anti-lock brakes & stability control systems
- Alcohol interlocks
- Black (blind) spot treatments
- Protective gear use – armor & air bag gear
- Helmet use – all-rider helmet laws – the # 1
Where to find a summary

- SMARTER at www.smarter-usa.org
  - Research
  - Overviews
  - 2018 – “Countermeasures that Work – What the Research Tells Us”
Please evaluate this presentation using the Lifesaversers Conference Mobile App.