

Motorcycle Helmets, Not Hats

David Sugerman, MD, MOH CDC FETP

Bloomberg Data for Health Initiative

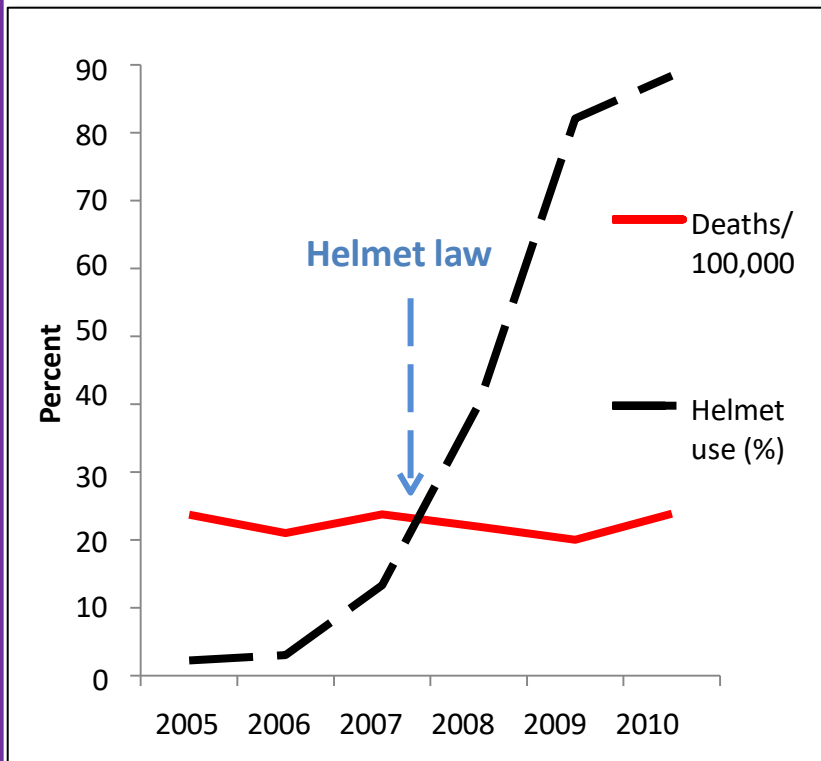
November 2016

Introduction

- NO significant change in risk of death among motorcyclists after passage of 2007 Motorcycle Helmet Law
- **80%** of motorcycle helmets in Vietnam are not certified and NOT crash-worthy (*Source: Helmet Case Study, CDC/Vital Strategies, 2016*)
- Wearing a certified helmet can reduce risk of injuries by **69%** and fatalities by **42%**

Problem

Rising helmet usage did not lead to drop in deaths after 2007 law



- Despite increased helmet use from 40% to 90%, **deaths did not decline**
- 80% of helmets not crash-worthy
- **Injuries from motorcycle crashes** cost Vietnam ~2,400 USD in direct medical costs and 54 weeks of lost normal activities from brain injury per person

Policy Options

Goal: Increase use of certified motorcycle helmets to meet crash-testing standards


1. Increased police enforcement: Implement random police checkpoints for certified helmets
 - Levy fines of 10 USD for uncertified helmet users
2. Government subsidy for certified helmets
 - 4 USD mail-in rebate for certified helmet
 - Uncertified helmets cost 2-3 USD. Certified helmets cost 10-15 USD
3. Public education campaign for certified helmets
 - Campaign to educate the public on dangers uncertified helmets
 - Dangers of uncertified helmets not currently understood by public

Policy Options

Goal: Increase the use of certified motorcycle helmets to meet crash-testing standards

Enforcement = best option

Police enforcement is most cost-effective option



	Enforcement	Subsidy	Campaign
Expected # of motorcycle riders who switch to certified helmets	8.7M	14.6M	2.9M
Estimated lives saved/year	629	1,049	210
Estimated cost to government	\$10.4M	\$116.5M	\$13M
Cost per life saved	\$16,525	\$111,050	\$61,970

Recommendations/Actions

- Increasing police enforcement of wearing certified helmets is both feasible and cost-effective
 - Compromise on exact number and required salary for police hires must be reached with Ministry of the Interior
 - Police officer training guide and implementation plan must also be reviewed and approved by Ministries of Interior, Health, and Transport
- The Institute of Public will work closely with all stakeholders
 - Ministries of Transport, Health, and Interior, World Health Organization, and the Asia Injury Prevention Foundation
 - These groups develop evidence-based training materials for police enforcement of a standardized motorcycle helmet law

Fines for police enforcements will have the highest public health impact per dollar invested. A supported implementation plan and agreed upon budget will be essential for success.

References

- World Health Organization: The facts: Injury and violence prevention in Vietnam
- Hung DV, Stevenson MR, Ivers RQ. Barriers to, and factors associated, with observed motorcycle helmet use in Vietnam. *Accid Anal & Prev.* 2008 Jul;40(4):1627-33
- Liu, B.C., et al., Helmets for preventing injury in motorcycle riders. *Cochrane Database Syst Rev*, 2008(1): p. CD004333
- Hung, D.V., M.R. Stevenson, and R.Q. Ivers, Prevalence of helmet use among motorcycle riders in Vietnam. *Inj Prev.* 2006. 12(6): p. 409-13
- Hoang HT, Pham TL, Vo TT, Nguyen PK, Doran CM, Hill PS. The costs of traumatic brain injury due to motorcycle accidents in Hanoi, Vietnam. *Cost Eff Resour Alloc.* 2008 Aug 22;6:17. doi: 10.1186/1478-7547-6-17
- Unpublished data, Institute of Public Health, Ho Chi Minh City, Vietnam