

Hats off to Vietnam's helmet law

By Martin Enserink

A decade ago, it wasn't unusual to see a Vietnamese family of five cheerfully braving the frenzied traffic of Hanoi on a single motorcycle—with nobody wearing a helmet. No longer. A stringent law passed in 2007 has made helmets compulsory—and has proven that such laws, which require political will more than money, can have a huge impact on public health. Research suggests that the law's passage saved more than 1500 lives the first year and reduced serious head injuries by almost 2500.

Traffic injuries aren't the first thing most people think about upon hearing "global health," but road accidents kill an estimated 1.24 million people worldwide annually, about the same number as tuberculosis and twice as many as malaria. That's why the World Health Organization (WHO) has made road safety a priority. In developing nations in particular, there are huge opportunities to drive down the death toll.

In Vietnam, the economic boom of the 1990s led tens of millions to trade in their bicycles for motorcycles, causing injuries to soar. (Cars are still relatively rare.) In 2010, Vietnam had 24.7 traffic deaths per 100,000 people, compared with 11.4 in the United States and 3.0 in Sweden. The country has had helmet laws on the books since 1995, but at first helmets were compulsory only on major roads, and enforcement was weak. Many Vietnamese resisted what they called rice cookers, saying they were uncomfortable in the tropical heat—or an assault on their hairdos.

In 2007, a new law required riders to wear helmets on all roads at all times. Fines were set at \$6 to \$12, a whopping 30% of the average monthly income. Foreign governments and nongovernmental organizations pitched in with money for education campaigns and free helmets. When the law took effect on 15 December 2007, helmet use jumped from less than 40% to almost 100% literally overnight.

It wasn't the end of all problems. Many riders initially didn't strap their helmets, which was then made an offense as well. Many of the helmets on the market are flimsy, and the government is still struggling to enforce quality standards. But a study published in 2010 by researchers at WHO's country office in Hanoi found 16% and 18% reductions in the risk of serious head injuries and deaths, respectively, in 2008.

Researchers at the Center for Global Development (CGD) plan to include the Vietnam law in the next edition of *Millions Saved*, a book on proven successes in global health—but strictly speaking, the evidence doesn't meet CGD's standards. The center prefers to see a randomized study or at least a "quasi-experimental" study design (see main story). That didn't happen in Vietnam. CGD decided to include the case anyway because it's difficult to see what else—besides the law—could have caused the drop. CGD's Miriam Temin hopes Vietnam's success will inspire other countries. ■

A "Helmets for Kids" ceremony, sponsored by Bloomberg Philanthropies, at a Hanoi school in 2012.



significance that each can reduce cases and deaths. But efficacy in a carefully managed, tightly monitored study does not equal effectiveness in the messiness of the real world. Confusing matters further still, weather patterns, an economic upswing, or improved housing can also have a big impact on disease.

The CGD researchers are part of a growing movement that seeks harder data about the number of lives actually saved by the billions poured into health in poor and middle-income countries. Such evidence is critical, proponents argue. After a decadelong explosion, funding for global health has leveled off (see p. 1258); governments and charities need to know the impact of their dollars to justify their

investments and to change programs that don't work well enough or not at all.

The new field of what is called impact evaluation is rapidly gathering steam. Large global health donors and developing world governments have widely accepted that they need better evidence of what works, and several new institutes are devoted to gathering it. Publications that use impact evaluation methods have skyrocketed. It's becoming increasingly difficult for the development assistance world to take credit for changes that might have occurred without their interventions—and to ignore the possibility that the money might have spared more people from disease if spent elsewhere.

"Agencies have come to realize that

impact evaluation is the only way you can meaningfully talk about results," says Howard White, who heads the International Initiative for Impact Evaluation (3ie), a nonprofit launched in 2008. "They want to be able to go back to their funders or boards and say, 'We've lifted 18 million out of poverty.'"

But debates are raging about what constitutes convincing evidence of effectiveness. Randomistas, as some derisively call them, will only seriously consider supersized versions of the randomized, controlled studies used to evaluate the efficacy of drugs and vaccines. Others, like the researchers at CGD who select case studies for *Millions Saved*, considered other evidence as well. (The sidebars about

Science

Hats off to Vietnam's helmet law

Martin Enserink

Science **345** (6202), 1261.

DOI: 10.1126/science.345.6202.1261

ARTICLE TOOLS

<http://science.sciencemag.org/content/345/6202/1261>

RELATED CONTENT

<http://science.sciencemag.org/content/sci/345/6202/1256.full>
<file:/content/sci/345/6202/news-summaries.full>

PERMISSIONS

<http://www.sciencemag.org/help/reprints-and-permissions>

Use of this article is subject to the [Terms of Service](#)

Science (print ISSN 0036-8075; online ISSN 1095-9203) is published by the American Association for the Advancement of Science, 1200 New York Avenue NW, Washington, DC 20005. The title *Science* is a registered trademark of AAAS.

Copyright © 2014, American Association for the Advancement of Science