

INSIGHT

Why Evidence-Based Speed Limits Save Lives - And Emotionally Driven Ones Don’t

When it comes to road safety, few decisions are as consequential, or as controversial, as setting speed limits. While it may seem intuitive to lower speed limits to reduce crashes or raise them to improve traffic flow, the truth is more nuanced. The safest and most effective speed limits are those grounded in engineering data and traffic science, not political pressure or emotional reactions.

The Danger of Emotionally or Politically Driven Limits

According to the Australasian College of Road Safety, despite the availability of scientific methods, speed limits are often influenced by emotion, public pressure or political agendas. For example, some jurisdictions lower speed limits as part of campaigns like Vision Zero, aiming to reduce fatalities without additional design interventions. While well-intentioned, these changes can at times overlook driver behavior and road design, leading to widespread noncompliance, increased speed variance and ultimately, higher crash potential.

A 2019 AAA Foundation study found that 47% of speed limit changes were politically motivated, and 76% were driven by public safety concerns, not engineering data. This disconnect between policy and practice not only undermines public trust but can also compromise safety. When drivers perceive speed limits as unrealistic or arbitrary, they are more likely to ignore them altogether.

Real-World Implications

After the repeal of the U.S. national maximum speed limit in 1995, states were free to set their own limits. A 2022 safety assessment by the National Academies of Sciences, Engineering, and Medicine found that some states, like Utah and Texas, raised limits based on engineering studies and saw no increase, or even a decrease, in fatality rates, thanks to better compliance and reduced speed variance.

Others, however, made changes based on public sentiment or political agendas, with mixed and sometimes dangerous results. A 2010 study published in the Journal of Transportation and Statistics found that states using engineering-based speed setting methods experienced 11% fewer fatal crashes than those using arbitrary or politically influenced methods.

Whether speed limits are being raised or lowered, the primary theme is that data-driven decision making has been repeatedly shown to reduce speed variability and crash potential. When speed limits are aligned with actual road conditions and driver behavior, rather than emotions or politics, compliance improves crash risk. As speeds become more consistent, the roadway system runs more efficiently, and roads become safer.

The Psychology of Speed

There's a common belief that "people will always drive five miles-per-hour over the limit," regardless of what the sign says. This assumption often leads to artificially low limits, which in turn increase noncompliance and driver frustration. Drivers may tailgate, make abrupt lane changes or ignore signage altogether, behaviors that significantly increase crash risk.

As vehicle technology improves with better brakes, stability control, adaptive cruise control and lane assist, drivers feel more comfortable traveling at higher speeds. Yet speed limits often remain outdated, failing to reflect these advancements or the actual capabilities of modern vehicles. These technological improvements, combined with roadway design, help drivers feel more confident at higher speeds, making it critical to identify the appropriate speed when considering adjustments.

In addition to vehicle technology and roadway design, individual driver's ability plays a significant role in speed comfort. Drivers with more experience, confidence or training may feel comfortable traveling at higher speeds, while other less experienced drivers may prefer slower speeds regardless of conditions. This variability in skill and comfort contributes to speed differentials, especially when posted limits do not reflect the natural flow of traffic. Recognizing that not all drivers interpret speed the same way reinforces the importance of setting limits based on observed behavior and roadway design, not arbitrary assumptions or blanket policies.

When speed limits are not updated, or are influenced by emotional or political directives, our law enforcement partners are placed at a disadvantage. This creates significant variability in how speeding is perceived and enforced, leading to inconsistent margins of leniency and undermining the credibility of posted limits.

International Perspectives

Countries like Germany, which famously has no general speed limit on parts of the Autobahn, rely heavily on a combination of driver education, strict lane discipline and engineering standards. Despite higher speeds, Germany's fatality rate per billion vehicle-kilometers traveled is significantly lower than in many countries with strict speed limits, including the United States. For example, the Federal Highway Research Institute of Germany reports approximately 1.6 deaths per billion travel-kilometers on the Autobahn, compared to 4.6 on urban streets and 6.5 on rural roads in the United States reported by the Insurance Institute for Highway Safety.

Conversely, countries that have implemented blanket reductions in speed limits without corresponding infrastructure or enforcement improvements have often seen limited or negative results. Post implementation studies like the University of Minesota – St Louis Park study suggests that speed limit reductions alone typically result in only 1-2 mph decreases in actual travel speeds, and speed variance increased after implementation. This suggests that without enforcement or physical infrastructure changes, speed limit reductions may not uniformly influence driver behavior and overall vehicle speeds, potentially undermining safety goals.

The Path Forward

To truly improve road safety, speed limits must be:

- **Data-driven:** Based on traffic studies, crash history and road design.
- **Context-sensitive:** Reflecting the function and environment of the roadway.
- **Consistently enforced:** To maintain credibility and compliance.
- **Transparent and explainable:** The public understands the rationale.

We must resist the urge to legislate or regulate based on fear or political optics. Instead, we should empower engineers and traffic safety professionals to make decisions rooted in science and evidence. As Charles Revson, founder of Revlon put it:

"Make decisions based on facts and data, not emotions."

This principle applies whether speed limits are proposed to be raised or lowered. Numerous studies have shown that when limits are set using engineering best practices, the result is reduced speed variability, improved driver compliance and a lower potential for crashes. In

contrast, arbitrary changes, whether politically motivated or emotionally driven, often lead to confusion, inconsistent enforcement and increased risk.

Ultimately, the path forward is not about choosing higher or lower numbers on a sign. It's about choosing methodology over ideology, and science over sentiment. When we prioritize evidence-based policy, we build roads that are not only efficient, but safer for everyone.

Conclusion

Speed limits are not just numbers on signs, they are critical tools in shaping driver behavior and ensuring public safety and they are tools that create expectations for the traveling public. When set correctly, they can reduce crashes, improve traffic flow and save lives; when driven by emotion or politics, they risk doing the opposite. The road to safer streets is paved not with good intentions alone, but with evidence, expertise and engineering.