

Translating Evidence into Policy:

Lessons Learned from the Case of Lowering the Legal Blood Alcohol Limit for Drivers

Based on:

Mercer SL, Sleet DA, Elder RW, Cole KH, Shults RA, Nichols JL. Translating evidence into policy: lessons learned from the case of lowering the legal blood alcohol limit for drivers. *Ann Epidemiol.* 2010;Jun;20(6):412-420

Overview

- Evidence of alcohol-impaired driving as a public health threat
- Examine the successful use of the processes of the Guide to Community Preventive Services to translate this evidence into policy
- Present valuable lessons learned that may be helpful to others seeking to translate evidence into policy

“In order to advocate effectively for lifesaving legislation, advocates must have clear and compelling scientific evidence to provide a basis for policy change. The combination of scientific research and advocacy efforts is key to success at the federal level, in state legislatures, and in communities across the nation... We weave research findings into every piece of our advocacy efforts.”

--Millie Webb, Mothers Against Drunk Driving

Alcohol-Impaired Driving: A Serious Public Health Problem

- 11,773 people were killed in alcohol-impaired driving crashes in 2008
- 1/3 of traffic related deaths involve alcohol-impaired drivers
- 224 children age 0-14 fatalities in 2008 involved alcohol-impaired driver
- 32 people in the US die daily in motor vehicle crash involving alcohol-impaired drivers
- More than \$51 billion spent on alcohol-related crashes in 2000

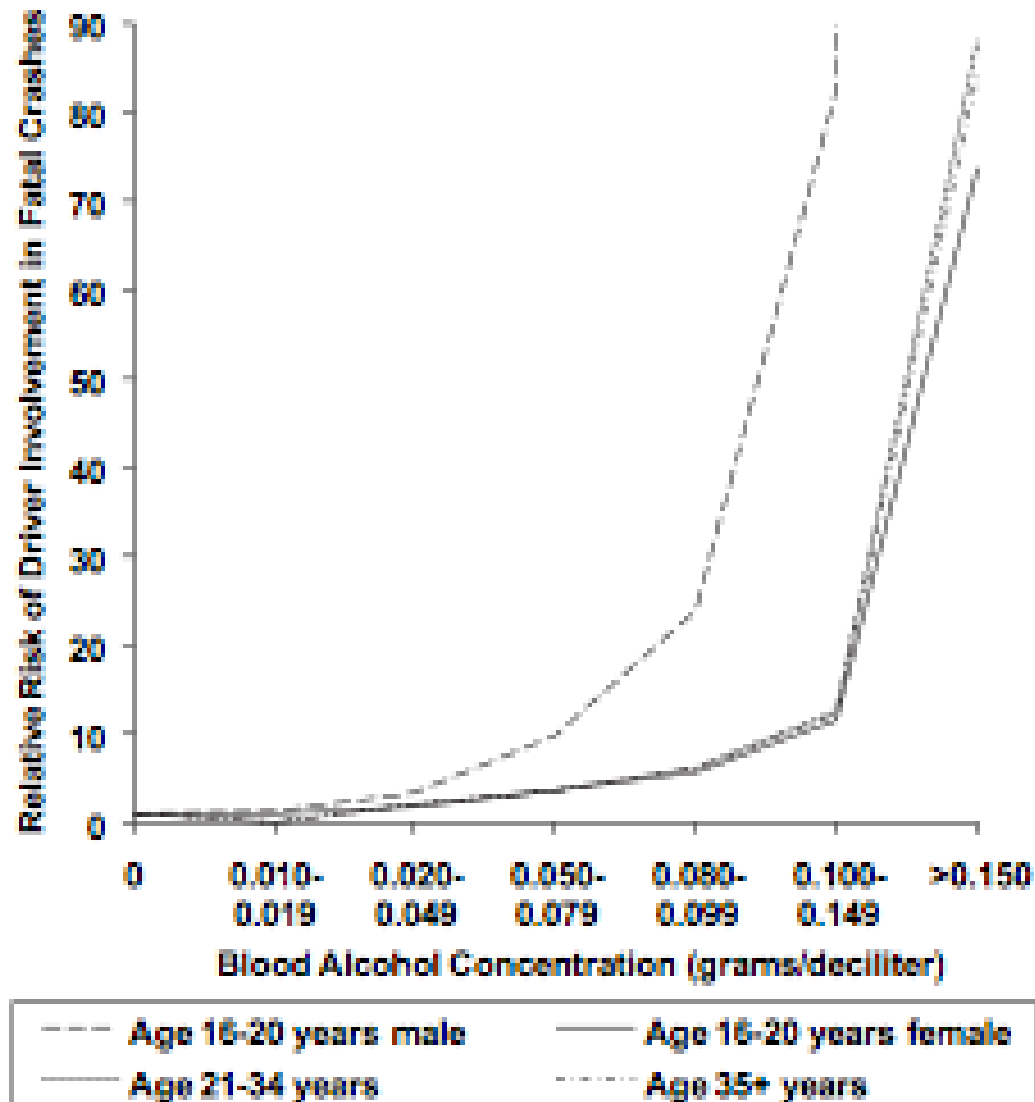
Blood Alcohol Concentration

- Alcohol-impaired driving fatality is a death resulting from a crash involving a driver with a BAC over the legal limit
- BAC measures the amount of alcohol in a person's bloodstream
- BAC measured in grams of alcohol per 100 milliliters of blood, abbreviated as g/dL
- Breath tests, blood or urine samples measure BAC levels

Evidentiary Rationale for BAC Laws

- 0.08 BAC law specifies illegal per se to operate a vehicle with a BAC of 0.08 g/dL or greater
- Older laws set limit at 0.10 g/dL
- lab and epi research demonstrates nearly all drivers are substantially impaired at 0.08 BAC
- impairments in braking, steering and lane changing begin at 0.02 g/dL
- As BAC increases, seat belt use drops, speed increases

BAC dose-response curve



Source: Zador P, Krawchuk S, Voas R. Alcohol-related relative risk of driving fatalities and driver impairment in fatal crashes in relation to driver age and gender: An update using 1996 data. J Stud Alcohol. 2000; 61: 387-395

0.08 BAC Policy Considerations and Decisions in the 1990s

- 1992 - NHTSA proposed all states adopt 0.08 BAC laws
- 1997 – only 15 states had 0.08 laws
- 2000 – 31 states had 0.10 BAC laws
- US with among the highest and most lenient legal limits for BAC in the world—2 or more times the level in Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Japan, the Netherlands, Norway, Portugal, Russia and Sweden

0.08 BAC Policy Considerations and Decisions in the 1990s

- 1998 legislation introduced which would have provided for sanctions for States that failed to adopt 0.08 BAC laws and that 0.08 BAC be included as a requirement for Basic Grants
 - Clinton Admin endorsed
 - but Conference Committee replaced with incentive grant program which provided \$500 million in grants over 6 years to states that had enacted and enforced 0.08 BAC laws

0.08 BAC Policy Considerations and Decisions in the 1990s

- As of 1999, seven published studies had examined the effectiveness of 0.08 BAC laws
 - NHTSA characterized the studies as establishing that 0.08 BAC was effective
 - General Accounting Office (GAO) raised methodological concerns, disputed 0.08 BAC laws were effective by themselves in reducing severity and number of alcohol-related crashes

Building a Bridge Between Evidence and Policy

- Motor Vehicle Injury Prevention Team in the Division of Unintentional Injury Prevention worked to develop process that would be:
 - Impartial
 - Use rigorous methods to assess evidence on effectiveness of 0.08 BAC laws and other interventions in reducing morbidity and mortality from motor vehicle crashes
 - Produce and disseminate resulting policy-related recommendations
 - Selected Community Guide process
- Selected Community Guide process
 - Systematic reviews of the effectiveness of community-based public health interventions
 - The systematic review findings then for the basis for a recommendation from the Task Force on Community Preventive Services

Community Guide's Essential Group Processes

- Based on the principle that active participation by intended users in both the conduct and dissemination of systematic reviews increases the relevance and accessibility of the findings and recommendations to those users
- Coordination Team of 6-15 subject matter and methodologic experts who are involved in all decision making
- Consultation Team of subject matter experts who provide consultation at key points in the review

Community Guide's Synthesis Methods

- Develop clear:
 - Intervention definition
 - Research questions
 - Logic model
- Search for and screen all available studies
- Evaluate quality of all candidate studies
- Detailed abstraction of qualifying articles, reports
- Generate evidence tables
- Summarize and synthesize the results

Motor Vehicle Team Review

- Review of the effectiveness of state laws that lower BAC for motor vehicle drivers from 0.10 g/dL to 0.08 g/dL
- Assessed benefits, harms of intervention, barriers to implementation, economic efficiency, and applicability of the intervention to multiple settings and situations
- Considered the body of empirical evidence on 0.08 BAC laws as a whole rather than as a series of discrete studies
 - This yielded a more reliable and valid estimate of the true effects of a change in BAC limits than possible from any individual study

Motor Vehicle Team Review cont'd

- Primary outcome: fatal injuries from alcohol-related crashes
- 12 studies, 10 included concurrent comparisons to control for threats to validity
- Pattern emerged when graphed, indicating lowering BAC limit to 0.08 was effective at reducing fatalities from alcohol-related motor vehicle crashes
- Potential to save 500 lives a year if implemented in all states
- Task Force issued recommendation that 0.08 BAC laws be implemented based on this evidence

After the Task Force: from Evidence to Policy Action

- During Congressional hearings on the Department of Transportation's 2001 Appropriations legislation, requests were raised about the effectiveness of 0.08 BAC laws in saving lives
- Non-federal member of the Community Guide Motor Vehicle Consultation Team arranged for systematic review findings and Task Force recommendation to be made available to the Transportation Subcommittee
- House and Senate approved Transportation Appropriations bill, citing the Community Guide evidence
- Clinton signed bill into law on October 23, 2000

Facilitating Evidence-Informed Decision Making by Stakeholders of Policy Action

- New bill included provision that required states to enact 0.08 BAC laws by October 2003 or face losing funding for federal highway construction
- DUIP developed and implemented dissemination plan to:
 - Raise awareness of the systematic review results and Task Force recommendations among motor vehicle safety experts, law enforcement, public health professionals, and policy makers
 - Foster wider, third-party distribution of review findings through emails, listservs, newsletters, etc.
 - Facilitate evidence-informed decision making among stakeholders of legislative and policy action at state and local levels

Facilitating Evidence-Informed Decision Making by Stakeholders of Policy Action

- DUIP 1) identified stakeholders and partners and key audiences with which to share findings 2) identified sources that would be most credible with user audiences and built on existing relationships
 - Presentations at national and international conferences
 - Met with leaders of NHTSA, Advocates for Highway Safety, Society for Public Health Education, Insurance Institute for Highway Safety, Mothers Against Drunk Driving
 - Sent via direct mail and email more than 600 packets of info people could use to share the results with partners, decision makers, media
 - Distributed flyers and copies of the systematic review publications at key national and international public health and motor vehicle safety conferences and meetings
 - Provided information to Governors Highway Safety Association who then mailed letters to their constituents

Impact of Policy Actions

- By July 12, 2004, all 50 states had passed 0.08 BAC laws
- Community Guide findings and Task Force recommendation influenced federal Appropriations process, resulting in the sanction for states without 0.08 BAC laws
- Sanction was influential in the state legislative processes
- Wide dissemination of Community Guide findings and recommendations likely helped facilitate state legislative processes in the post-appropriation period

Impact of Policy Actions

- Other key government agencies, constituents, advocates, and voluntary and not-for-profit groups that helped diffuse and apply the results on a wider scale:
 - National Association of County and City Health Officials
 - New York State
 - US Department of Transportation
 - American Automobile Association Foundation
 - Insurance Institute for Highway Safety
 - International Council on Alcohol, Drugs, and Traffic Safety
 - United Kingdom's Health Development Agency
 - World Health Organization and World Bank
 - Global Road Safety Partnership
- NHTSA continues to highlight the Community Guide 0.08 BAC laws and related reviews on its website and in its educational training for enforcement officials

Lessons Learned

Successful translation of evidence into policy was related to:

- Salience of the health problem and policy intervention, and the compelling relationships between the health problem, policy intervention, and health outcomes
- Use of systematic review methods to synthesize the full body of evidence
- Use of a recognized, credible, and impartial process for assessing the evidence
- Development of evidence-based policy recommendations by an independent, impartial body
- Ability to capitalize on readiness and teachable moments
- Active participation of key partners and intended users throughout all stages of the process
- Use of personalized channels, targeted formats, and compelling graphics to disseminate the evidence
- Capacity to involve multiple stakeholders in encouraging uptake and adherence
- Attention paid to addressing sustainability

Conclusions

- Study suggests value of preparing from the outset for and moving in a deliberate progression from:
 - Clearly outlining the relationships between health problems, interventions and outcomes
 - To systematically assessing and synthesizing the evidence
 - To using a credible group and rigorous process to assess the evidence
 - To having an impartial body make specific policy recommendations on the basis of the evidence
 - To being ready to capitalize on briefly opening policy windows
 - To undertaking personalized, targeted, and compelling dissemination of the evidence and recommendations

Conclusions cont'd

- Case study also highlights:
 - Importance of engaging key partners and stakeholders throughout production and dissemination of evidence and recommendations
 - Value of involving multiple stakeholders in encouraging uptake and adherence of policy recommendations and of addressing sustainability
- Lessons learned are actively being used by Community Guide to enhance dissemination and translation into action of evidence on the effectiveness of other policy interventions
- Lessons may help others working to translate epidemiologic and other forms of evidence into policy