Strategies to Reduce Impaired Driving in the Asia-Pacific Countries

Prepared by
James C. Fell, Principal Research Scientist
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Disclaimer

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Acknowledgements

This report was prepared by Mr. James C. Fell, Principal Research Scientist, Department of Economics, Justice and Society, NORC at the University of Chicago, 4350 East-West Highway, Bethesda, Maryland 20814, United States. Fell-jim@norc.org

It was prepared under the guidance received by Mr. Ishtiaque Ahmed, Economic Affairs Officer and Project Officer; and Ms. Jo Fung, Chief of Sustainable Transportation Section of the Transport Division, UNESCAP.
Summary of Recommendations
Education and Awareness

Awareness building through education that impaired road users are risky and drink-driving is unacceptable.
Education and Awareness

Awareness building through education: start with truck and motorcycle drivers
Consider taxing and/or increasing the tax on alcohol sales with some of the revenue used for enforcement and publicity.
Legislation & Enforcement

Consider establishing a suitable minimum legal drinking age for alcohol consumption.

The legal drinking age 21 has been highly effective in the United States.
Legislation & Enforcement

Consider adopting a suitable national law prohibiting drink-driving.

Law should be based upon a suitable blood alcohol concentration limit [e.g., $\geq .05 \text{ g/dL}$]
Legislation & Enforcement

Random Breath Testing (RBT) and/or sobriety checkpoints should be key enforcement strategies.
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Random Breath Testing (RBT) and/or sobriety checkpoints should be key enforcement strategies.
Legislation & Enforcement

Sanctions for drink-driving offenses should include **license suspension** and appropriate fines.
Legislation & Enforcement

Consider mandating alcohol ignition interlocks for convicted drink-driving offenders.
Road Safety Data

Consider collecting blood alcohol concentration (BAC) data on all fatally injured drivers, motorcyclists, bike riders and pedestrians.
Fatal Crash Data
Road Safety Data

Consider tracking BACs on fatally injured drivers on an annual basis in order to measure progress

Percentage of drivers and riders killed with BAC of .05 or more in Australia: 1980-2015 (where BAC is known*)
Consider conducting roadside surveys of drivers in traffic in order to measure progress.

Percentage of drivers and motorcycle riders in traffic on week-end nights in the United States with BACs > .08 g/dL.
Road Safety Data

Consider keeping track of drink-driving arrests on an annual basis in order to measure progress.

Annual Arrests for Driving While Intoxicated in the United States

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions</th>
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<td>2015</td>
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<tr>
<td>2016</td>
<td>1.02</td>
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</tbody>
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Systems Approach

In order to reduce impaired driving in your country will take a systems approach (there is no “silver bullet”):

- **Educate** the public on the risk of injury and death
- Adopt strong drink-driving **laws**
- Conduct frequent, publicized and visible impaired driving **enforcement**
- Adopt appropriate **sanctions** for drink-driving offenses
- Collect good **data** to evaluate your programs
Challenges

- Lack of public awareness of the problem
- Lack of law enforcement resources
- Lack of consistent and quality data systems
- Substantial proportion of traffic fatalities are pedestrians, bicyclists and motor bike riders (lack of effective programs for these vulnerable at-risk populations)
Progress in ESCAP Countries

- Every country except one has a national drink-driving law (2016)
- 32 countries have a law based upon the BAC of the driver (15 countries do not)
- 24 countries have BAC limits of .05 g/dL or lower (16 countries do not have a BAC limit; 10 countries have BAC limits of .08 g/dL and one country has a .10 g/dL limit)
- 19 countries report testing all drivers involved in fatal crashes for their BAC
- 13 countries reported a decrease in the percent of fatal crashes involving alcohol between 2013-2018
Good Practices

- Administrative License Revocation/Suspension (ALR/ALS) - for drink-drivers over the BAC limit. Effective in Europe, Australia and the US

- Appropriate Fine Levels – for drink-driving offenders. High enough to get attention but not too high to be imposed
Good Practices

- Mandate the use of **Alcohol Ignition Interlocks** for convicted drink-driving offenders.

Installation Costs in the US ($75-$150);
monthly costs in the US ($75-$125 paid by the offender)
Good Practices

- Mandate the use of Alcohol Ignition Interlocks for convicted drink-driving offenders.

If offender has a motor bike or no vehicle, mandate random testing at home
Good Practices

- Screening and Appropriate Treatment for Substance Abuse/Addiction Issues

Professional Services and Resources required
Good Practices

- Minimum Legal Drinking Age Laws
- Zero Tolerance (no alcohol) for Young Drivers
- Graduated Driver Licensing
Good Practices

- Social Marketing and Community-Based Interventions – provide education and awareness
Good Practices

Drink-Driving Detection Guide

**DWI DETECTION GUIDE**

Weaving plus any other cue: \( p = \text{at least } .65 \)
Any two cues: \( p = \text{at least } .50 \)

**PROBLEMS MAINTAINING PROPER LANE POSITION**
- Weaving
- Weaving across lane lines \( p = .50-.75 \)
- Straddling a lane line
- Swerving
- Turning with a wide radius
- Drifting
- Almost striking a vehicle or other object

**SPEED AND BRAKING PROBLEMS**
- Stopping problems (too far, too short, or too jerky)
- Accelerating or decelerating for no apparent reason
- Varying speed
- Slow speed (10+ mph under limit)

**VIGILANCE PROBLEMS**
- Driving in opposing lanes or wrong way on one-way
- Slow response to traffic signals
- Slow or failure to respond to officer's signals
- Stopping in lane for no apparent reason
- Driving without headlights at night
- Failure to signal or signal inconsistent with action

**JUDGMENT PROBLEMS**
- Following too closely
- Improper or unsafe lane change
- Illegal or improper turn (too fast, jerky, sharp, etc.)
- Driving on other than the designated roadway
- Stopping inappropriately in response to officer
- Inappropriate or unusual behavior (throwing, arguing, etc.)
- Appearing to be impaired

**POST STOP CUES**
- Difficulty with motor vehicle controls
- Difficulty exiting the vehicle
- Fumbling with driver's license or registration
- Repeating questions or comments
- Swaying, unsteady, or balance problems
- Leaning on the vehicle or other object
- Slurred speech
- Slow to respond to officer/officer must repeat
- Provides incorrect information, changes answers
- Odor of alcoholic beverage from the driver

* \( p \geq .50 \) when combined with any other cue:
- Driving without headlights at night
- Failure to signal or signal inconsistent with action

The probability of detecting DWI by random traffic enforcement stops at night has been found to be about three percent (.03).
Good Practices

- Visible Enforcement
DUI Mobile Command Center
You Drive Impaired. You Lose.

Sobriety Checkpoint Ahead
Slow to 15 MPH
Be Prepared to Stop
Thank you for your cooperation
Good Practices

Help from the Community
Opportunities

- **Conduct Cost-Benefit Studies** in countries with high fatality rates
- Secure funding from the **United Nations Road Safety Trust Fund**
- **Combine Law Enforcement Resources** and conduct RBT
- **Use Passive Alcohol Sensors (PAS)** to detect drinking drivers
- **Use Ridesharing** (e.g., Uber; Lyft) as an alternative
- Follow the research on **autonomous vehicles**
Ultimate Goal: Decrease Impaired Driving Fatal Crashes
Contact Information

James C. Fell
Principal Research Scientist
National Opinion Research Center (NORC) at the University of Chicago
4350 East-West Highway, 8th Floor
Bethesda, MD 20814
301-634-9576
fell-jim@norc.org
Questions?
NEXT SLIDES ARE TO HELP ANSWER QUESTIONS
Created to reduce harmful drinking globally by identifying effective, science-based programs and policies for public-private partnerships to advance positive social and behavior change.
Core Areas:

1. Supporting transparent and verifiable monitoring and evaluation of Global Smart Drinking Goals
2. Guiding 6 city pilot studies with science-based interventions and technical advice
3. Supporting the training of healthcare providers
4. Advancing alcohol health literacy (knowledge of strategies to avoid harmful drinking) as an approach to reduce harmful drinking
Six Pilot Cities

1. Leuven, Belgium
2. Brasilia, Brazil
3. Jiangshan, China
4. Zacatecas, Mexico
5. Columbus, Ohio, USA
6. Johannesburg, South Africa
Percentage of Drivers on U.S. Roads in 2007 and 2013-14 with Drugs Other than Alcohol (Oral Fluid and Blood)

- Drug Positive, 2007: 16.3%
- Drug Positive, 2013-14: 20.0%
- Marijuana (THC), 2007: 8.6%
- Marijuana (THC), 2013-14: 12.6%
Distributions of BAC for Drivers Involved in Fatal Crashes (excluding BAC=0), 2000

Source: FARS
Classical Deterrence Theory

- Three Factors
  - Probability of being Apprehended
  - Speed with which the sanction follows apprehension
  - Severity of Sanction

Sure, Swift and Severe (but not too severe)
Classical Deterrence Theory

- Based on Perception—Not necessarily on reality

- Two concepts:
  - *General Deterrence*—members of the general public who do not experience sanctions
    - [bigger bang for the buck]
  - *Specific Deterrence*—offenders who experience sanctions
Three Goals of Criminal Law

- *Deter* potential offenders
- *Catch* those who offend
- *Sanction* those you catch
What are Passive Alcohol Sensors?

- Tool to detect alcohol
- Extension of police officer’s nose
- Quick, objective, passive
- Legal, constitutional
- Not PBT or evidential test
- Can detect low levels of alcohol
Police Detection of High BAC Drivers, with and without Passive Alcohol Sensors (PAS)

<table>
<thead>
<tr>
<th></th>
<th>Percent detected</th>
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<tr>
<td></td>
<td>W/O PAS</td>
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<tr>
<td>Sobriety checkpoints</td>
<td></td>
</tr>
<tr>
<td>Charlottesville, VA</td>
<td>45</td>
</tr>
<tr>
<td>Fairfax, VA</td>
<td>55</td>
</tr>
<tr>
<td>Routine patrol</td>
<td></td>
</tr>
<tr>
<td>Columbus, OH</td>
<td>69</td>
</tr>
<tr>
<td>Special DUI patrol</td>
<td></td>
</tr>
<tr>
<td>Chattanooga, TN</td>
<td>88</td>
</tr>
</tbody>
</table>
Passive Alcohol Sensor (PAS) in use at Fairfax County sobriety checkpoint
NHTSA DWI Detection Guide

Probability Driver BAC $\geq .08$

Weaving plus any other cue: $p = \text{at least } .65$

Any two cues: $p = \text{at least } .50$

**Problems Maintaining Proper Lane Position**

$p = .50 - .75$

- Weaving, Weaving across lane lines, Straddling a lane line, Swerving, Turning with a wide radius, Drifting, Almost striking a vehicle or other object.

**Speed and Braking Problems**

$p = .45 - .70$

- Stopping problems (too far, too short, or too jerky), Accelerating or decelerating for no apparent reason, Varying speed, Slow speed (10+ mph under limit)
DWI Detection Guide

Vigilance Problems

\[ p = 0.55 - 0.65 \]

- Driving in opposing lanes or wrong way on one-way, Slow response to traffic signals, Slow or failure to respond to officer's signals, Stopping in lane for no apparent reason, Driving without headlights at night, Failure to signal or signal inconsistent with action
Judgment Problems

- Following too closely, Improper or unsafe lane change, Illegal or improper turn (too fast, jerky, sharp, etc.), Driving on other than the designated roadway, Stopping inappropriately in response to officer, Inappropriate or unusual behavior (throwing up, arguing, etc.), Appearing to be impaired.
p > .50 when combined with any other cue:

- Driving without headlights at night; Failure to signal or signal inconsistent with action.

NOTE: The probability of detecting DWI by random traffic enforcement stops at night has been found to be about two or three percent (.02 - .03).
POST STOP CUES

- Difficulty with motor vehicle controls and exiting the vehicle, Fumbling with driver's license or registration, Repeating questions or comments, Swaying, unsteady, or balance problems, Leaning on the vehicle or other object, Slurred speech, Slow to respond to officer/officer must repeat, Provides incorrect information, changes answers, Odor of alcoholic beverage from the driver.
Enforcement Strategies for Underage Drinking

- Compliance Checks ("Stings")
- Cops in Shops
- False ID Detection
- Shoulder Tap Programs
- Party Dispersal
- Keg Registration Tracking
- Sobriety Checkpoints
- Traffic Stops
Alcohol Policy Strategies

- Retail price of alcohol/taxes
- Minimum drinking age
- Form of retail sale
- Density of alcohol outlets
- Responsible Beverage Service (RBS)
- Enforcement (RBT, checkpoints, BAC limits, zero tolerance)
- Graduated licensing (night restrictions)
SIGNS OF INTOXICATION
[Patrons with illegal BAC limits: >=.08]

- Loss of Dexterity, e.g. fumbling with billfold, change, or drinking glasses.

- Lack of Balance, e.g. stumbling, having to prop oneself up, slipping from bar stools.

- Poor Distance Perception, e.g. over- or under-reaching, missing chair.
SIGNS OF INTOXICATION
[Patrons with illegal BAC limits: >=.08]

- **Slurring of speech**, e.g. very poor articulation, stretching out syllables, particularly “s”.
- **Hostility**, e.g. showing unwarranted or extreme anger, threatening fights,
- **Extreme Profanity**, e.g. highly profane language, particularly in sedate company
- **Lack of inhibition**, e.g. intruding on strangers, revealing confidences, other very inappropriate activity
Reasonable Efforts to Prevent Intoxication

- Offering food
- Providing alternative transportation
- Cutting off a patron
- Enlisting help from the patron’s friends
- Serving water or soda on the house
- Measuring drinks
- Checking IDs
- Calling the police (last resort)
NAS Committee Recommendations

- Increase federal and state alcohol taxes
- Limit alcohol sales availability
- Enforce laws prohibiting sales to underage and intoxicated patrons
- Lower the BAC Limit for driving to .05 g/dL
- Conduct frequent sobriety checkpoints
- Support alternative transportation alternatives
- Implement DUI Courts
- Enact all offender alcohol ignition interlock laws
- Create a federal interagency coordinating committee