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Evidence Synthesis on Drink Driving and Blood Alcohol Concentration Policies

Key Findings

- Despite the availability of laws regarding Blood Alcohol Concentration (BAC) in most countries, implementation and enforcement of drink driving policies remains a challenge.
- Successful drink driving policies outline comprehensive policy responses covering areas such as availability, marketing, and pricing of alcohol; drink driving; prevention interventions; and available treatment in health care systems.
- Enforcement of drink driving policies often requires legislative support; although some policy options can be implemented through non-legal frameworks, such as guidelines.
- Drivers and motorcyclists with a BAC level above zero are at a greater risk of a crash (of almost 11 times) compared with those whose BAC level is zero.

Recommendations

- Drink driving and BAC policies should:
    - Have a clear focus on implementation and evaluation.
    - Consider different BAC levels for different groups (i.e., first-time drivers, teenagers, etc.).
- Efforts should be made to improve the implementation of existing policies of current BAC limits (less than 0.05 g/dL) rather than reducing the BAC limits to zero.
- BAC limits should be set at a maximum of 0.05 g/dL or lower for the general population and at or lower than 0.02 g/dL for novice and commercial drivers.
- To increase the effectiveness of interventions, anti-drinking and driving programs should:
    - Assess available data to identify target groups.
    - Ensure the laws on drink driving are clear and enforceable.
    - Enforce the laws fairly and firmly, and with appropriate punishments.
    - Ensure that public information supports the law and its enforcement.
    - Monitor and evaluate the programs.

⚠ The Problem

- In low- and middle-income countries, 33%–69% of fatally injured drivers and 8%–29% of non-fatally injured drivers consumed alcohol before being involved in a crash.[1]
- Approximately 20% of drivers are found to have BAC levels in excess of the legal limit in fatal road traffic crashes occurring in most high income countries.[1]

🎯 Aim of the Review

We aimed to synthesize evidence on the impact of drink driving and identify successful policy responses to reduce road traffic injuries and fatalities related to drink driving.

🗹 Summary of Evidence

- Alcohol consumption can impair judgment and increase crash risk even at relatively low BAC levels. However, the effects become worse with increasing BAC levels.[2]
  - Not only do judgment and reaction time suffer, but vision also deteriorates.
- The risk of a crash increases significantly at a BAC level of 0.04 g/dL. Individuals with BACs between 0.08 percent and 0.09 percent had an almost 11 times greater risk of a fatal single-vehicle crash.[2]
- Inexperienced young adults driving with a BAC level of 0.05 g/dL have a 2.5 times higher risk of a crash compared with more experienced drivers.[3]
  - Across all BAC levels, young adults aged 20–29 years were estimated to have three times the risk compared with drivers aged 30 years and older.[4]
  - Young drivers (under 20 years old), had more than five times the risk of a fatal crash compared with drivers aged 30 and older, at all BAC levels.[3]
- Simulation studies have found poor performance in terms of parking, driving at slow speeds, and steering at BAC levels of 0.05 g/dL and higher.[5,6]
- A comparison of alcohol test results[7,8] found that each 0.02 increase in a driver's BAC level almost doubled the risk of a single-vehicle fatal crash.
- The World Health Organization's (WHO) Global status report on road safety 2023 documented:[9]
  - BAC limits at the national level from 166 responding countries, with 48 meeting the WHO's best practice recommendation (BAC limit of <0.05 g/dL for the general driving population and <0.02 g/dL for novice drivers).
  - There is strong evidence supporting a low BAC limit between 0.02 g/dL and 0.05 g/d

References

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