

The Use of Psychoactive Substances in Argentine Transportation: an Analysis of Modal Regulations

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Abstract

This article is an advance of the findings obtained in the framework of the study Consumption of Psychoactive Substances in Transportation (CoSuTra). This study was promoted by the JST National Directorate of Accident Evaluation and Monitoring and SEDRONAR Argentine Drug Observatory (OAD).

The work, of national scope, aims to investigate the consumption of alcohol and other psychoactive substances (PAS) in frontline workers of the four modes of the Argentinean transportation system: aviation, road, railway, and maritime and inland waters.

Introduction

This article presents preliminary findings from the study on Psychoactive Substance Use in Transportation (CoSuTra). This study was initiated by the JST National Directorate of Accident Evaluation and Monitoring and SEDRONAR OAD.

This nationwide study aims to investigate the use of alcohol and other psychoactive substances (PAS) among frontline workers in the four modes of the Argentine transportation system: aviation, road, railway, and marine and inland waters.

The objective is to survey and analyze the prevention and control strategies in each of the modes as well as the perceptions among workers and their patterns of alcohol and other PAS consumption during 2022 and 2023.

The proposal aims to prevent accidents and incidents and to contribute to safety. Additionally, it seeks to produce strategic information that allows the various actors in the system to plan and manage actions aimed at strengthening safety while considering the specific issues related to alcohol and other PAS consumption.

The issue of alcohol and drug consumption is a multidimensional phenomenon, which impacts not only on the overall health of individuals but also on their social relationships (such as those established with family and work). This study focuses on PAS consumption; therefore, aspects related to the production, distribution, trafficking, and smuggling of substances exceed the scope and will not be considered.

Below are some conceptual definitions, followed by the initial results of the systematization and analysis of regulations addressing control measures and prevention strategies related to alcohol and other PAS consumption in transportation.

1. Conceptual Definitions

The term frontline worker¹ may vary for each mode of transportation. Therefore, the roles or functions which

are considered frontline—those involved in sensitive safety tasks—are detailed.

Aviation: According to RAAC 120 point b., the operator's personnel performing safety-sensitive functions includes, but is not limited to: a) flight crew members; b) cabin crew members; c) flight operations officers; d) maintenance personnel; e) aircraft loading and unloading personnel; and f) any other personnel performing functions that require holding an aeronautical license, certificate of competence, or aeronautical qualification.

Road: According to Provision No. 48/2019 issued by ANSV, a worker is considered to be engaged in safety tasks if they are driving personnel (passenger and freight transport).

Railway: According to CNRT Resolution No. 404 of 2013, the personnel subject to controls by the Personnel Reception Center to be Controlled (CRPC) includes drivers, conductors, signalers, gatekeepers, station masters/assistants, switch operators, and flaggers.

Marine and Inland Waters: The frontline worker encompasses the entire crew of a vessel, according to Ordinance 5-2018 (DPSN), point 3.6.8.3. of Annex 1, which states: "The captain ensures an adequate crew to address all aspects related to maintaining normal operations safely on board. In cases where a vessel is withdrawn from service for a specified period, according to point 3.1.33, the company will ensure a sufficient crew to maintain the vessel in safe conditions, to protect it, and to safeguard the marine environment, and to respond to emergency situations".

Therefore, national regulations recognize that the roles or functions deemed sensitive to safety extend beyond the personnel subject to breathalyzer controls listed in Article 1 of Ordinance 2 of 2011, from the Directorate of Navigation Safety Police (DPSN) of the Argentine Naval Prefecture (PNA), which establishes the following: "The exercise of jobs or functions on board is prohibited for navigational personnel of the national merchant marine and those authorized by Ministerial Resolution 285 of 2003 and its modifications, responsible for the navigation and command of the vessel, propulsion, pilotage, and/or cargo handling, regardless of the blood alcohol concentration level detected." For this reason, in marine and inland waters, the entire crew will be considered personnel engaged in tasks related to the safety of operations on board.

1. The definition adopted for this study takes into account front-line workers who, in the national regulations, are subject to the substance controls established in each mode. However, the list of selected front-line workers may not be exhaustive, as there are other roles or functions considered sensitive to operational safety that are not subject to this type of controls.

2. Survey and Systematization of Regulations

Table 1. Regulations Identified and analyzed by the investigation team

Mode of Transportation	Issuing Agency	Regulation	Objective of the Regulation
Aviation	National Civil Aviation Administration (ANAC)	Argentine Civil Aviation Regulation (RAAC) 67	Standards for the Issuance of the Aeronautical Medical Certification
		RAAC 120	Regulation for the Prevention and Control of Psychoactive Substance Abuse in Aeronautical Personnel
Road	National Congress	Law 24449	National Traffic Law
	National Road Safety Agency (ANSV)	Provision 48/19	National License System for Interjurisdictional Transportation (LiNTI)
	National Transport Regulation Commission (CNRT)	Resolution 28/16	Criteria for determining the suspension of the use, validity, or issuance of driver's licenses
		Provision 1028/17	Amends Res. 28/16. In the case of positive blood alcohol levels and/or use of psychoactive substances, the use, validity, or issuance of the license is suspended for a period of 90 days
		Provision 816/21	Approval of Procedure Manuals, including the Cargo Road Transportation Manual, Interurban Public Service Passenger Road Transportation Procedure Manual, Free Offer Passenger Road Transportation Procedure Manual, Tourism Passenger Road Transportation Procedure Manual, and Psychophysical Control Unit (PCU) Procedure Manual
Provision 419/22	Creation of the Preventive Control Unit Program, which expands and enhances the functions of the PCUs		
Railway	CNRT	Resolution 404/13	Evaluation Protocol of the Reception Center for Personnel to Control and Random Evaluation of Operational Personnel
		Resolution 681/15	It incorporates random controls for driving and operational personnel across the rest of the railway network outside the Metropolitan Area of Buenos Aires
	Ministry of Transportation	Resolution 367/19	Criteria for obtaining the National Enabling License (LNH) and the Driver Assistant Authorization

Mode of Transportation	Issuing Agency	Regulation	Objective of the Regulation
Marine and Inland Waters	Argentina Naval Prefecture (PNA)	Ordinance 2/11 VOLUME 5	Alcohol testing for personnel of the National Merchant Marine
		Ordinance 2/19 VOLUME 5	Psychophysical Test Regulation for the qualification of onboard personnel of the National Merchant Marine
		Marine and Inland Waters Navigation Regime (REGINAVE, Decree 770/19)	Regulatory standards derived from current laws and decrees on navigation, aimed at ensuring the safety of individuals and vessels
		Ordinance 5/18	Safety Management Standards for Vessels and Pollution Prevention (NGS)
	General Directorate of Education of the Navy (DGED)	Provision 58/15	It approves project programs for STCW training courses
	International Maritime Organization (IMO)	International Convention for the Safety of Life at Sea (SOLAS)	Minimum standards for the construction, equipment, and use of vessels compatible with safety
		International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)	Minimum standards on training, certification, and watchkeeping for seafarers; countries are obligated to comply with or surpass
		Circ. MSC.1/Circ. 1598	Guidelines on Fatigue
		International Ship and Port Facility (ISPS) Code	Without making reference to aspects related to the consumption of workers in the maritime sector, it focuses on preventive measures to be adopted to protect vessels governed by the SOLAS Convention from drug trafficking and the transport of illegal cargo
		International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F)	Approved by Argentina; ratification is still needed for it to come into effect at the national level
		OIT	Maritime Labour Convention (MLC 2006)
	Work in Fishing Convention (No. 188)		Minimum standards protecting various aspects of the work of fishermen in any type of commercial fishing

Source: JST creation based on collected data

3. Preliminary Findings

This report identifies and systematizes a set of national and international regulations that address the control measures and prevention strategies established concerning the consumption of psychoactive substances (PAS) among frontline workers in transportation.

It was found that the regulations are very heterogeneous regarding the information they provide. In this sense, differences were identified in how the consumption of PAS is referenced in the procedures for granting licenses, the protocols for conducting controls, the frequency of these controls, and the types of substances tested. Despite these divergences, national regulations for all modes specify that, at the time of testing, the blood alcohol concentration must be zero. While the classification of other psychoactive substances varies according to the mode of transportation, in the railway, road, and aviation sectors, this consumption is an impediment to performing the previously detailed frontline roles or functions. In the national regulations for the marine and inland Waters, no substances other than alcohol are specified.



From the analysis of the surveyed regulations, it was observed that different approaches to addressing the consumption of PAS prevail depending on the mode of transportation. On one hand, there is an approach focused on risk prevention and health promotion, which views consumption as an illness or a medical problem. On the other hand, there is an approach that emphasizes the prohibition and penalization of consumption. It is important to note that these perspectives and their respective approaches can coexist within a single mode of transportation, and here we highlight which one predominates in their regulations. The local regulations for the road and aviation fall within the first group, as they refer to prevention strategies, while the national regulations governing marine and railway focus on control measures.

Aviation regulations include a specific chapter that outlines the minimum conditions for the treatment and rehabilitation of personnel affected by substance consumption. In contrast, the Merchant Marine regime establishes penalties for those who violate the law and for those deemed unfit due to professional incompetence, misconduct, inexperience, recklessness, or negligence in the performance of their duties (REGINAVE, 2019). It is important to note that the penalties described are not related to situations of PAS consumption. Therefore, the violation of the regulation does not consider the specificity of the consumption issue from a holistic health perspective of the worker, and it should be penalized.

"It was observed that different approaches to addressing the consumption of PAS prevail depending on the mode of transportation."



In general terms, regardless of the approach taken, it is observed that the consumption of alcohol and other PAS poses a risk to transportation safety. This premise is based on the understanding that consumption affects the psychophysical conditions necessary to perform sensitive safety tasks. Additionally, in road and aviation, it is specified that the risk is significant not only due to its immediate effects but also because of the long-term consequences that consumption can cause. In fact, aviation regulations define the misuse of PAS as any use that poses a direct risk to the user or endangers the life, health, or well-being of others; or that causes or exacerbates an occupational, social, mental, or physical problem or disorder (RAAC 120.005, points 4, 14, 15).

On the other hand, it is noteworthy that in road (CNRT Provision 419/22) and marine (Circ. MSC.1/Circ.1598), the consumption of PAS is associated with another risk factor, such as fatigue. In the case of road, as the regulation states, fatigue can be exacerbated in situations where the driver is affected by the consumption of energy drinks or stimulants that alter the state of wakefulness. Furthermore, the International Maritime Organization (IMO) issued a circular addressing the causes and consequences of this issue, as well as the risks it poses to the safety and health of marine personnel, safety, and marine environmental protection. Specifically regarding drugs, this circular notes that marine personnel must be aware of how drugs and supplements can affect their health

and sleep-wake cycles. It mentions that the effects of medications vary not only from person to person but also in the same person depending on the time of day, mood, fatigue, and the amount of food consumed.

Regarding the types of substances tested, there are also differences based on the specificity with which they are defined and developed in each mode of transportation. In road, the regulations governing the issuance of the National Law on Traffic and Road Safety (LiNTI), as well as its use, suspension, and validity, refer to alcohol testing and substances, although these are not detailed. In the case of Provision No. 48/2019 from the National Road Safety Agency (ANSV), the habitual use of medications is distinguished from other drugs, which includes pharmacological treatments.

“National regulations in all modes specify that, at the time of the controls, the blood alcohol concentration must be equal to zero.



On the other hand, a certain degree of ambiguity regarding PSAs is again evident in the training programs for obtaining a license, as training related to 'legal and illegal drugs' is mentioned. In comparison, a greater degree of specificity can be observed in the procedural manuals prepared by the CNRT. In the case of the manuals for the inspection of passenger and freight services, the control of alcohol is mentioned, along with six other substances (cocaine, marijuana, methamphetamines, benzodiazepines, opioids, and amphetamines). In the UCP procedures, the substances are not listed, but it is required that the specific substance detected be indicated in the case of a positive result.

At the same time, there is a particular concern regarding the consumption of coca leaves, both in the UCP Procedural Manual and in Provision No. 419/2022 of the CNRT, which expands its functions.

This focus on 'coqueo' (the chewing of coca leaves) is present only in the road sector, suggesting that it may be a type of consumption associated with the working conditions specific to this mode of transportation.

In aviation, a similar degree of specificity to that of the road sector was found. While RAAC 67 only mentions alcohol and substance testing (without specifying which substances), RAAC 120 defines the term 'psychoactive substance,' allowing for the

identification of its immediate effects and subsequent consequences. At the same time, the seven substances that must be evaluated in toxicological exams are detailed (alcohol; opiate metabolites; opioid metabolites; cannabinoid metabolites; cocaine metabolites; amphetamines, methamphetamines, methylenedioxymethamphetamine, and methylenedioxyamphetamine; benzodiazepines and barbiturates).



In rail and marine and inland waters, a lower level of precision of the definitions of substances was found. In railway, the regulation includes alcohol control and 'prohibited substances,' but without specifying which substances are included in this group. When substance testing is conducted, only a positive or negative result needs to be indicated, without specifying which substance was detected. Nevertheless, it is worth noting that the controls include a question about the use of medications, which would allow for differentiation between the consumption of pharmaceuticals and other types of substances.

Finally, in marine and inland waters, Ordinance DPSN 2/2011 regulates alcohol testing. Regarding the amended STCW '78 Convention, to which Argentina is a signatory, the mention of the consumption of 'illicit substances' was identified, indicating that these can impair a seafarer's fitness for duty

The terms 'prohibited substances,' 'illicit,' or 'legal/illegal' focus on the relationship between substances and legislation and, therefore, on the consumer as a potential offender. These classifications, along with generic expressions such as 'substances' or 'drugs,' hinder the possibility of obtaining more detailed information about the substances detected.

In conclusion, it is worth noting that the analysis of control measures and prevention strategies in

this study includes not only the systematization of regulations but also the conducting of semi-structured interviews with key representatives from the four modes of transportation.

So far, nine interviews have been conducted, which have helped to provide a more nuanced understanding of the scope of procedures applied in alcohol and other PSA controls, as well as to explore the protocols implemented when positive cases are detected and how that information is recorded and stored. The investigation team believes that the systematization and analysis of these interviews will provide further insights into how the regulations identified in this study are interpreted and applied.

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2. Three interviews were conducted with operational safety managers of aeronautical companies engaged in commercial flights; two with hierarchical personnel of a state agency in charge of the inspection and psychophysical control of land passenger transport workers; two in the maritime mode, the first with managers of a river passenger transport company and the second with a hydrocarbon transport shipping company; and finally, two more with operational safety managers of two state railroad operators engaged in cargo transport.