

## What to do when drivers test positive for methadone in roadside drug tests? The Spanish Experience

### ¿Que hacer en los casos que dan positivo a metadona en los controles de drogas en carretera? La experiencia de España

FRANCISCO HERRERA-GÓMEZ\*,\*\*, F. JAVIER ÁLVAREZ\*,\*\*\*.

\* Farmacología, Facultad de Medicina, Universidad de Valladolid, Valladolid. \*\* Nefrología, Hospital Virgen de la Concha - Sanidad de Castilla y León, Zamora. \*\*\* CEIm, Hospital Clínico Universitario de Valladolid - Sanidad de Castilla y León, Valladolid.

Driving under the influence of illicit drugs, as well as some legal substances, is against the law internationally (WHO, 2016). To prevent such risky behaviour, Spain is one of the European Union countries with a zero tolerance policy, where driving with any amount of drugs in the body is illegal. Roadside drug screening or testing is mandatory (the law penalises all those who refuse to undergo such tests believing they would turn out positive), and are performed on oral fluid. When a driver tests positive, a second sample of oral fluid is obtained and sent to accredited laboratories for confirmation and quantification analysis of the detected substances (Alvarez, Gonzalez-Luque & Seguí, 2016).

Spanish legislation establishes that when the substance detected is a medical drug which requires a doctor's prescription and is used in accordance with its marketing authorisation (as indicated in the summary of product characteristics), the standard penalties are not applied provided that no other 'non-permitted' substance is detected. This requires a (medical) report to confirm the prescription of the drug detected (Fierro, Colas, González-Luque & Álvarez, 2017): such could be the case of patients in a methadone maintenance program.

In a recent article, we revealed the presence of opioids in the confirmation analysis of those drivers with a positive result in road drug tests between 2011 and 2016 (Herrera-Gómez, García-Mingo, Colas, González-Luque & Alvarez, 2018). In this period, a total of 179,645 tests were carried out, of which 65,244 were positive. Methadone was confirmed present in 4.1% of all these positive cases, with

most drivers being male (94%) and middle-aged (mean  $\pm$  standard deviation (SD) 41.90  $\pm$  7.61 years). In almost all cases, other illicit drugs were also detected (99.6%), such as heroin (81.9%), cocaine (45%), cocaine and cannabis (33%), or cannabis alone (6%). Table 1 shows the figures for positive tests during the period covered by the study.

Table 1. Presence of methadone in road drug controls in Spain, 2011–2016

Year	Number of tests carried out in roadside controls*	Number of drivers testing positive in roadside controls**	Number of cases confirmed by toxicology labs	
			Methadone only	Methadone and other substances
2011	743	62	0	10
2012	3487	1087	1	169
2013	4563	2017	1	132
2014	29643	9991	2	465
2015	76040	25966	3	933
2016	65169	26121	5	935
Total	179645	65244	12	2644

Note. \* Data correspond to number of tests per year

\*\* Data refer to positive cases in roadside screening controls or drug detection tests.

The results of this study emphasise the serious problem of the use of multiple psychoactive substances by Spanish drivers. Methadone and other opioids authorised as medical drugs are often used abusively in the population, generally in combination with other psychoactive substances (Guardia, 2018; Volkow & McLellan, 2016).

Received: October 2018; Accepted: November 2018.

Send correspondence to: Dr. F. Javier Álvarez.

Avenida Ramón y Cajal, 7, 47005 Valladolid. Teléfono: +34983423077.

E-mail: alvarez@med.uva.es.

A key question is what should be done when a driver-patient requests a (medical) report confirming the prescription of methadone (and other drugs) to avoid a traffic fine following a positive result in a drug control. It should be the norm to request that these patients present the document they received from the traffic authorities with the result of the confirmation analysis, before issuing the report confirming the prescription of methadone (and other drugs), if indeed this is the case. It should not be forgotten that the driver-patient will be penalised if other psychoactive substances not legally authorised are detected in his/her body. In any case, we must always report what we know: the prescribed medication and the patient's clinical status.

The kits currently used in roadside drug controls in Spain do not detect methadone; it should thus not be surprising that a large percentage of drivers testing positive for methadone in the confirmation analysis were also positive for other opioids (heroin) and illicit drugs (cocaine, cannabis). However, the high percentages of combined use surprised us, and we consider them alarming.

Of the patients in opioid substitution programmes in Europe, 63% are under methadone treatment, while 35% are being treated with buprenorphine and buprenorphine/naloxone (EMCDDA, 2017, pp: 68-69). In Spain, 91.2% were on methadone treatment in 2016, while only 8.8% were on buprenorphine/naloxone (Plan Nacional sobre Drogas, 2018, pp: 109-110). Buprenorphine and methadone can both provoke moderate to severe deterioration in the ability to drive safely (Ravera et al, 2013), and, like other medications which affect driving, the packaging of these drugs in Spain carries a specific pictogram: the "medicines and driving" pictogram (and the leaflets contain patient information on these effects).

The data do not allow us to determine whether or not these methadone-positive cases in roadside drug controls involve drivers who "abuse" this opioid or drivers on methadone maintenance programmes. The frequent comorbidity of these opioid-dependent patients, which could also affect their driving ability, must also be taken into account. In these cases, it is particularly relevant to prescribe those drug(s) which cause less deterioration in the driver's abilities.

Patients should be informed that driving under the influence of drugs means putting themselves and other road users at risk, that the devices currently in use will detect the presence of drugs (and certain medications) in saliva, and that they could be penalised (Alvarez, Gonzalez-Luque & Seguí, 2016; Gutiérrez-Abejón, Herrera-Gómez, Criado-Espejel & Álvarez, 2017).

### Conflict of interests

Dr. F. Javier Alvarez has received funding and has served as consultant, adviser, or speaker in continuing education

for the past four years for the following entities: Reckitt Benckiser, Indivior and Shire.

### Funding

This study was funded by the Instituto de Salud Carlos III, Redes Temáticas de Investigación Cooperativa, Red de Trastornos Adictivos [grant number RD16/0017/0006], and co-funded by the European Union's ERDF.

### Referencias

- Álvarez, F.J., González-Luque, J.C. & Seguí-Gómez, M. (2015). Drugs, Substance Use Disorder and Driving: Intervention of Health Professionals in the Treatment of Addictions. *Adicciones* 27, 161–167. doi:10.20882/adicciones.702.
- EMCDDA. (2017). *European Drug Report 2017*. Lisbon: EMCDDA. Retrieved at <http://www.emcdda.europa.eu/edr2017>.
- Fierro, I., Colás, M., González-Luque, J.C. & Álvarez, F.J. (2017). Roadside opioid testing of drivers using oral fluid: the case of a country with a zero tolerance law, Spain. *Substance Abuse Treatment, Prevention, and Policy*, 12, 22. doi:10.1186/s13011-017-0108-3.
- Guardia, J. (2018). Overdose epidemic linked to the prescription of opioid analgesics in the United States. *Adicciones*, 30, 87-92. doi:10.20882/adicciones.936.
- Gutiérrez-Abejón, E., Herrera-Gómez, F., Criado-Espejel, P. & Álvarez, F. J. (2017). Use of driving-impairing medicines by the population: a population-based registry study. *BMJ Open*, 7, e017618. doi:10.1136/bmjopen-2017-017618.
- Herrera-Gómez, F., García-Mingo, M., Colás, M., González-Luque, J. C. & Álvarez F. J. (2018). Opioids in oral fluid of Spanish drivers. *Drug and Alcohol Dependence*, 187, 35-39. doi:10.1016/j.drugalcdep.2018.02.016.
- Plan Nacional sobre Drogas. (2018). *Memoria 2016*. Delegación del Gobierno para el Plan Nacional sobre Drogas (DGPNSD). Madrid: Ministerio de Sanidad, Servicios Sociales e Igualdad. Retrieved at [http://www.pnsd.mscbs.gob.es/profesionales/publicaciones/catalogo/catalogoPNSD/publicaciones/pdf/2018\\_MEMORIA\\_2016.pdf](http://www.pnsd.mscbs.gob.es/profesionales/publicaciones/catalogo/catalogoPNSD/publicaciones/pdf/2018_MEMORIA_2016.pdf).
- Ravera, S., Monteiro, S., de Gier J. J., van der Linden, T., Gómez-Talegón, T. & Álvarez, F. J., the DRUID Project WP4 Partner (2012). A European approach to categorising medicines for fitness to drive: Outcomes of the DRUID project. *British Journal of Clinical Pharmacology*, 74, 920-931. doi:10.1111/j.1365-2125.2012.04279.x.
- Volkow, N.D. & McLellan, A.T. (2016). Opioid abuse in chronic pain-misconceptions and mitigation strategies. *The New England Journal of Medicine*, 374, 1253–1263. doi:10.1056/NEJMr150777.

WHO. (2016). *Drug use and road safety: a policy brief*. Geneva: World Health Organization. Retrieved at <http://www.who.int/iris/handle/10665/249533>.