

# Presence of Methylphenidate in the illegal drug market: analysis of samples submitted to a drug checking facility

P. Quintana<sup>1,2</sup>, M. Grifell<sup>3,4</sup>, Á. Palma<sup>3,4</sup>, C. Gil<sup>1</sup>, I. Fornís<sup>1</sup>, L. Galindo<sup>4</sup>, M. Farré<sup>4,5,6</sup>, M. Ventura<sup>1,4</sup>, M. Torrens<sup>3,4,7</sup>

<sup>1</sup>Energy Control, Associació Benestar i Desenvolupament, Barcelona, Spain. <sup>2</sup>EAP Raval Sud, ICS, Barcelona, Spain.

<sup>3</sup>Institut de Neuropsiquiatria i Addiccions, Parc de Salut Mar, Barcelona, Spain. <sup>4</sup>IMIM (Hospital del Mar Medical Research Institute), Barcelona, Spain. <sup>5</sup>Departament de Farmacologia clínica, Universitat Autònoma de Barcelona, Barcelona, Spain.

<sup>6</sup>Hospital Germans Trias i Pujol, Servei de Farmacologia Clínica, Barcelona, Spain. <sup>7</sup>Departament de Psiquiatria, Universitat Autònoma de Barcelona, Barcelona, Spain

## Introduction

Methylphenidate is a CNS stimulant approved for treatment of ADHD. It is generally considered well tolerated and exhibiting low dependence potential, although diversion for recreational use has been described (Bogle & Smith, 2009). Provided that its effects are comparable to those of more popular drugs of abuse, such as cocaine and amphetamines, we hypothesized that it could be sold as such.

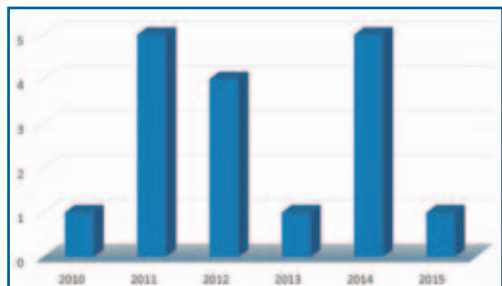
## Materials and methods

We analyzed all samples screened from August 2009 to August 2015 (n=20.333), in which Methylphenidate was found. Energy Control is a Spanish harm-reduction non-governmental organization that offers users the possibility of analyzing the substances they intend to consume.

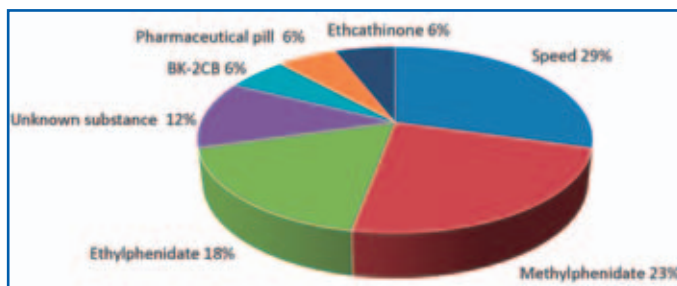
## Results

Out of a total 20.333, 17 samples contained methylphenidate

Number of samples containing methylphenidate delivered per year (n=20.333)



Samples containing Methylphenidate were delivered as (n=17)



Methylphenidate submitted as pharmaceutical pill (Rubifén®)

## Discussion

Results show a small number of samples where methylphenidate was detected. Some of them were sold as other drugs, although the number is also very small.

One unknown substance was a mixture of Methylphenidate, Lidocaine and Ephedrine, probably with the intention to mimic the effects of cocaine.

One sample containing Methylphenidate was sold as BK-2CB; this finding is puzzling and likely a confusion when handling the substance, as effects differ greatly.

## Conclusion

Presence of Methylphenidate in the Spanish illegal drug market seems anecdotic and maintained over the studied timeframe. Moreover, it was sold as substances with similar dosages, lowering potential for life-threatening intoxications. Therefore, our results partially support our hypothesis, but suggest that diversion of Methylphenidate into the Spanish drug market might not be a concerning phenomenon.

## Bibliography

Bogle, K. E., & Smith, B. H. (2009). Illicit methylphenidate use: a review of prevalence, availability, pharmacology, and consequences. *Current Drug Abuse Reviews*, 2(2), 157–176. <http://doi.org/10.2174/1874473710902020157>.

Supported in part by grants of Instituto de Salud Carlos III-FEDER (RTA RD12/0028/0009), and The European Commission (Drug Prevention and Information Programme 2014-16, JUST/ 2013/DPIP/AG/4823, EU-MADNESS project). L. Galindo is a Rio Hortega fellowship (ISC-III; CM14/00111).