

HRB Centre for Primary Care Research Research Briefs

Supervised methadone consumption and retention in methadone maintenance treatment in primary care



The supervised administration of opioid substitution therapies, where the dose is consumed under the direct supervision of a pharmacist or clinician, is recommended by international guidelines (WHO, 2009) and is standard practice in many countries. Supervised consumption ensures that patients take their medication as prescribed and prevents drug diversion.

A previous study between the HRB Centre for Primary Care Research (www.hrbcentreprimarycare.ie) and the School of Pharmacy, RCSI showed that among patients undergoing methadone treatment in primary care, continuing in methadone treatment is associated with a reduced risk of death [1].

A further study assessing the effect of supervised methadone consumption on time to discontinuation of methadone maintenance treatment (MMT) was recently conducted [2].

We can be found at:

HRB Centre for Primary Care Research
Department of General Practice
Royal College of Surgeons in Ireland
123 St. Stephen's Green
Dublin 2, Ireland

Tel: +353-1-4022473
Email: hrbcentre@rcsi.ie
www.hrbcentreprimarycare.ie

HRB CENTRE FOR
PRIMARY CARE RESEARCH



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Queen's University
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HR^B Health
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NUI Galway
OÉ Gaillimh

123 St Stephen's Dublin 2, Ireland

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This was a cohort study of persons experiencing ≥ 1 MMT episodes in primary care (2004–2010), ($n=6393$). The length of treatment episodes was based on methadone prescriptions and retention was classified as no interruption in prescribed methadone lasting >7 days. When a patient did not receive a new prescription within seven days after the end of coverage of a prescription, they were considered to have ceased treatment. We evaluated the relationship between supervised consumption and time to discontinuation of treatment using proportional hazards gamma frailty models to account for recurrent treatment episodes. Age, gender, median daily methadone dose, and comorbidities were included as potential confounders.

This national community based cohort study of over 6000 patients identified a J-shaped relationship between supervised methadone consumption and retention in treatment over a six-year follow-up. Having between 20 and 60% of methadone scripts supervised (compared to $<20\%$) was associated with increased retention in treatment (longer time to discontinuation) (20–39% HR = 0.88, 95% CI 0.81–0.95; 40–59%: HR = 0.87, 95% CI 0.81–0.94). However, having 60% or more of their methadone scripts dispensed under supervised consumption (compared to $<20\%$) was associated with shorter treatment episodes (faster time to discontinuation) (60–79% of scripts: HR = 1.28, 95% CI 1.20–1.36; $>80\%$ of scripts: HR = 3.59, 95% CI 3.38–3.81). Median daily dose between 60 and 120 mg per day, and multiple treatment episodes were also associated with longer time to discontinuation of treatment. Finally, patients with multiple comorbidities were also significantly more likely to experience shorter treatment episodes.

The J-shaped relationship observed between supervised consumption and retention in MMT in primary care, represents a double edge sword; too little supervision ($<20\%$ of methadone prescriptions) is associated with treatment cessation, this risk of treatment cessation decreases with regular supervision (20% to 60% of methadone scripts), but eventually increases above the reference group (those with little supervision) when a patient is exposed to higher levels of supervised consumption ($>60\%$ of methadone prescriptions).

The articles can be viewed at:

[1] Cousins G, Boland F, Courtney B, Barry J, Lyons S and Fahey T. (2015). Risk of mortality on and off methadone substitution treatment in primary care: a national cohort study. *Addiction*, 111(1). www.ncbi.nlm.nih.gov/pubmed/26234389

[2] Cousins, G., Boland, F., Barry, J., Lyons, S., Keenan, E., O'Driscoll, D., Bennett, K. and Fahey, T. (2017). J-shaped relationship between supervised methadone consumption and retention in methadone maintenance treatment (MMT) in primary care: National cohort study. *Drug and Alcohol Dependence*, 173. www.ncbi.nlm.nih.gov/pubmed/28232249