



ST VINCENT'S
HEALTH AUSTRALIA

Opioids and Fitness to Drive

Victorian Opioid Management ECHO
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UNDER THE STEWARDSHIP OF MARY AIKENHEAD MINISTRIES

What is the evidence?

“People under the influence of methadone shouldn’t be on the road” says Ms Burn (NSW deputy police commissioner). Daily Mail 2 January 2018

NSW Health statement: “the department had comprehensive clinical guidelines for patients participating in a treatment program”

and

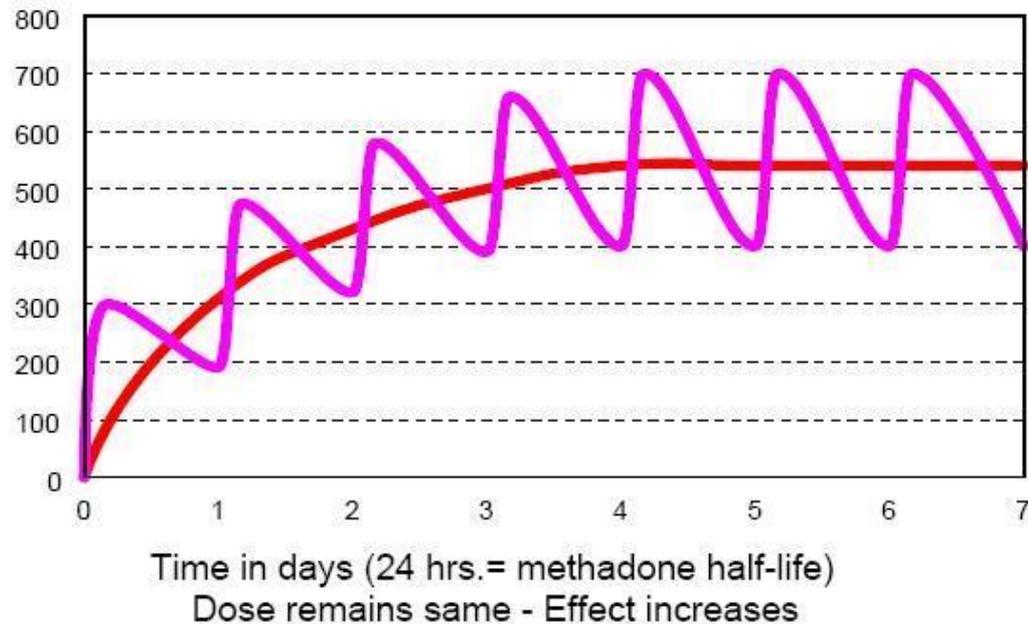
Once stabilised with consistent doses ...it was unlikely the person’s driving skills would be impaired by methadone unless other drugs were consumed”

Is this so, and what do we know about individuals on MMT/ORT?

Lack of experimental studies on methadone/buprenorphine and their effect on actual on-the-road driving

Steady State Simulation - Methadone Maintenance

Steady State attained after 4-5 half-lives - 1 dose every half-life



In the graph above the wavy line represents the blood levels of methadone as well as the "effect" it has on the individual patient.

Some principles

Opioids have many clinically significant interactions with other substances

Health Practitioners have obligations

Patients have obligations

Guidelines exist

Don't forget the impact of a lack of sleep

This is a major challenge!

The evidence is conflicting:-

US Office of National drug Control Policy 2000: “Methadone does not impair cognitive functions...It is not sedating or intoxicating, nor does it interfere with ordinary activities such as driving a car”

EU directive on driving licences 1991: “ Driving licences shall not be issued to, or renewed for, applicants or drivers who regularly use psychotropic substances, in whatever form, which can hamper the ability to drive safely where the quantity absorbed are such as to have an adverse effect on driving”

A research report from Norway published in the December 11, 2011 issue of *Addiction* found that men taking methadone for opioid addiction were more than twice as likely as the general population to be involved in motor vehicle accidents with personal injury. However, there was no evidence that the methadone itself caused the accidents. The study did not even suggest that stable patients on methadone maintenance treatment (MMT)—men or women—are any more likely to be in motor vehicle accidents than non-MMT patients.

The lead author told Reuters Health, which picked up the study and ran it under a distorted headline (“Drivers on methadone twice as likely to crash”) December 30, that to blame methadone for the crashes would be speculation. “Many different things go into increasing traffic accident risk, like reduced attention, slowed reaction, slowed psychomotor performance, less accurate psychomotor performance, etc.,” said Jorgen G. Bramness, MD, PhD, of the Norwegian Centre for Addiction Research at the University of Oslo.

Systematic Review

Early epidemiological studies found no substantial difference of risk of MVA for patients on MMT and control groups.

More recent studies have found increased risk for MMT patients and for those of buprenorphine treatment

Experimental studies have shown increased cognitive impairment and psychomotor impairment for patients on Ort but less so with buprenorphine maintenance therapy.

Some patients on ORT have only slight impairment

Conclusion: Both MMT and BMT may cause impairment. Individual evaluation of driving performance is necessary!

Some experimental studies have not shown opioid induced impairment on cognitive or psychomotor performance (Fishbain et al. 2003; Hill and Zacny 2000; Walker and Zacny 1998, Zacny, Lichtor, Thapa et al. 1994)

Some epidemiological studies have not shown an increased risk of traffic accident involvement (Drummer et al 2004; Ray et al 1993)

Some specific thoughts/considerations

Nicotine- may decrease methadone; nicotine cessation may increase methadone levels

Driving impairment is most likely to occur when dose is increased until steady levels reached

In some individuals sedation will occur post-dose

Some individuals continue to use opioids/other substances which may cause impairment

What does this mean for us in Victoria?

Refer to guidelines:

www.austroads.com.au/drivers-vehicles/assessing-fitness-to-drive

Chapter 9.

Sedating drugs. This is a heterogeneous group that includes all the drugs that cause mental clouding, sleepiness and poor responsiveness to the environment. It includes the benzodiazepines, sedating antihistamines, sedating antidepressants and narcotic analgesics. There is specific data on driving risk for some substances and none for others. Practitioners should be aware of the implications of their prescribing on the ability of patients to drive safely.

There is an increased risk of personal injury crashes among drivers using anti-anxiety drugs compared with the rest of the population.²⁷ The risk is exacerbated by alcohol and other sedatives.²⁸ There is a hangover effect, and a small dose of any sedative the following day can potentiate the effect. A meta-analysis of more than 500 studies showed that the degree of impairment of driving skill was directly related to the serum level of each substance.²⁹ In Australian studies benzodiazepines are found in about 4 per cent of fatalities and 16 per cent of injured drivers. Ninety-eight per cent of the drivers who had diazepam at any level combined with alcohol at any level were responsible for the collision in which they were injured. In a study of drivers taken to hospital for treatment after a collision, 98 per cent of drivers who had a benzodiazepine at any level with alcohol at any level were responsible for the collision

conclusions

As at 2012

Literature too limited to allow clear conclusions to be drawn

Some evidence that low-doses of methadone and buprenorphine may cause impairment in tasks related to driving among opioid-naïve subjects

No clear conclusion can be drawn as to whether opioid maintenance therapy patients, or particular subgroups of patients, should or should not be allowed to drive

Epidemiological studies show large variations in risk of RTA

Individual driving assessment would seem to be the best informed approach!

References:

1. Can Patients Receiving Opioid Maintenance Therapy Safely Drive? A Systematic Review of Epidemiological and Experimental Studies on Driving Ability With a Focus on Concomitant Methadone or Buprenorphine Administration. Strand MC, Fjeld B, Arnestad M, Morland J. Traffic Injury Prevention 2013; 14:26-38
2. Medical Aspects of Fitness to Drive- A guide for health practitioners. NZ Transport Agency
3. Prescription Drugs and Driving. Drug and Alcohol Services South Australia
4. www.austroads.com.au/drivers-vehicles/assessing-fitness-to-drive
5. Daily Mail 2 January 2018

