Kaedah Perubatan Dalam Proses Rawatan dan Pemulihan Dadah

Associate Prof Dr Muhammad Muhsin Ahmad Zahari
Jabatan Perubatan Psikologi,
Fakulti Perubatan,
Universiti Malaya
muhsin@ummc.edu.my

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Pengenalan

- Masalah ketagihan adalah rumit dan kompleks
- Ketagihan – terbahagi kepada **dadah** dan **bukan dadah**
- Konsep ketagihan bukan sahaja kepada dadah tetapi termasuk alcohol dan bukan dadah seperti permainan elektronik (e-gaming), perjudian, internet, seks

Pengenalan - Justifikasi penggunaan kaedah perubatan dalam proses rawatan dan pemulihan dadah

- Ketagihan adalah **penyakit kronik yang boleh berulang-ulang** (chronic relapsing disorder)
- lanya diperjelaskan oleh bukti saintifik di mana fungsi otak telah terganggu dan tidak normal
- Kaedah ini terbukti mengurangkan risiko penyakit berjangkit dengan menggunakan platform **pengurangan kemudaratan** (Harm reduction)

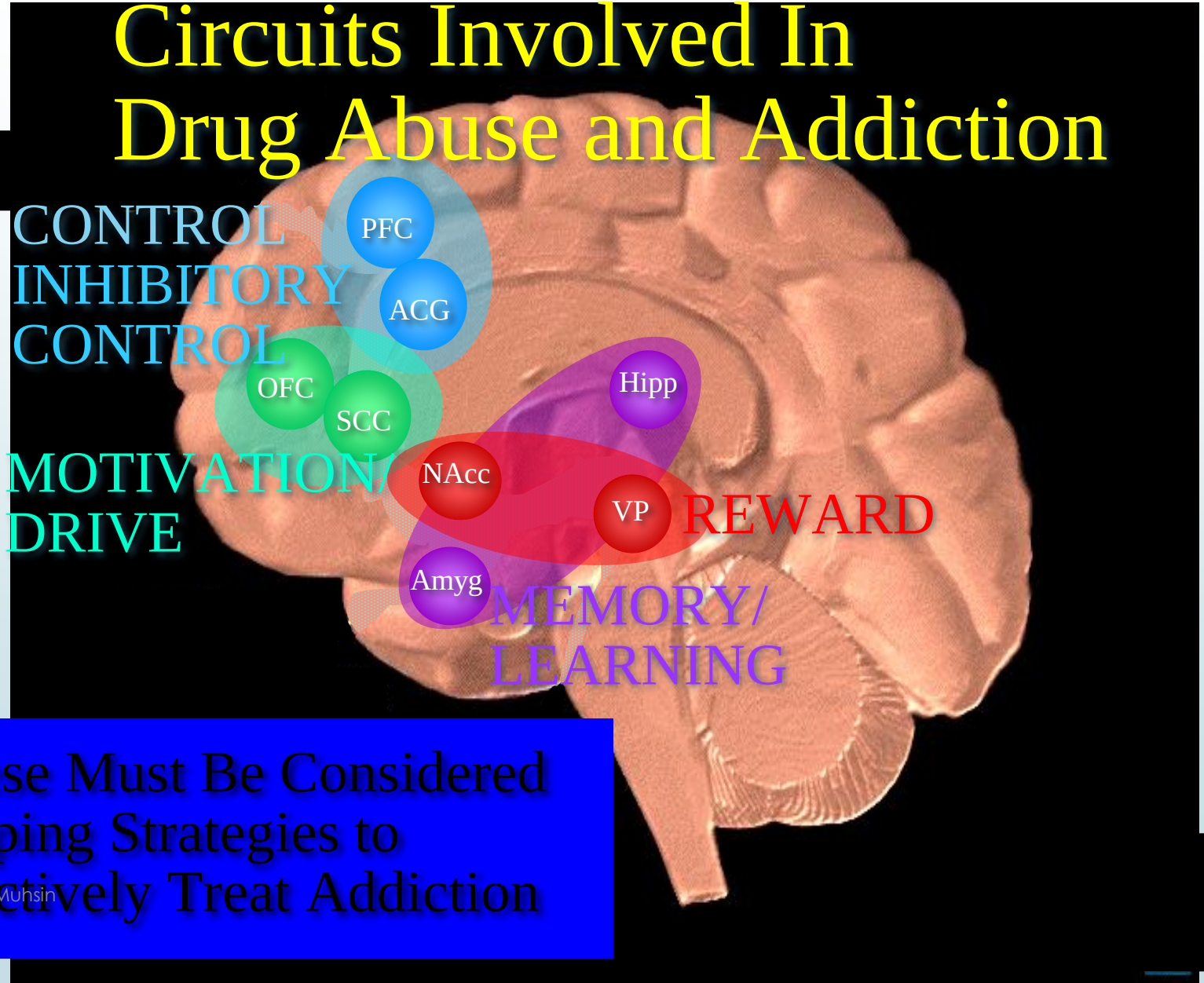
Perbandingan antara kaedah perubatan dan pendekatan sosial

Kaedah perubatan (Medical Model)	Pendekatan sosial/undang-undang
Harm reduction (Pengurangan kemudaratan)	Tujuan - Abstinence (Pemberhentian)
Sebagai Pesakit	Sebagai pesalah/hukuman
Menggunakkan Medication Assisted Therapy	Menggunakan kaedah tanpa bantuan ubat-ubatan
Hanya sukarela	Menerima juga kaedah tidak sukarela

Apa itu rawatan penagihan dengan bantuan ubat? (Medication Assisted Therapy)

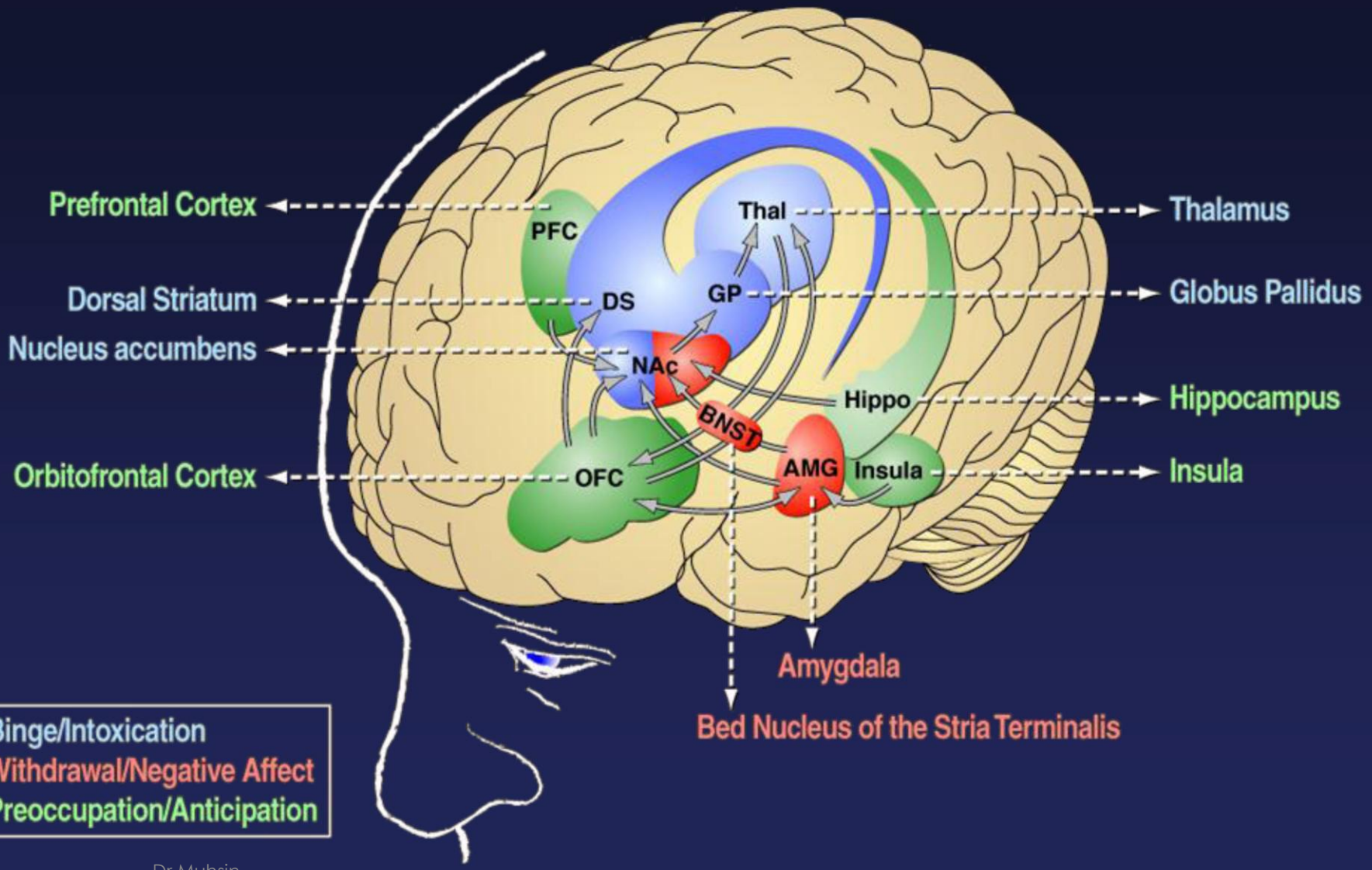
- Kombinasi dalam proses perawatan dan pencegahan
  - Penggunaan ubat-ubat yang terbukti berkesan
  - Terapi kaunseling
- Dalam proses *recovery* juga ada perasaan craving untuk terus mengambil dadah
- Craving mendedahkan risiko relapse atau pengulangan
- Penggunaan ubat ini terbukti amat berjaya dalam mengurangkan craving dan seterusnya mencegah dari pengambilan semula dadah

Circuits Involved In Drug Abuse and Addiction



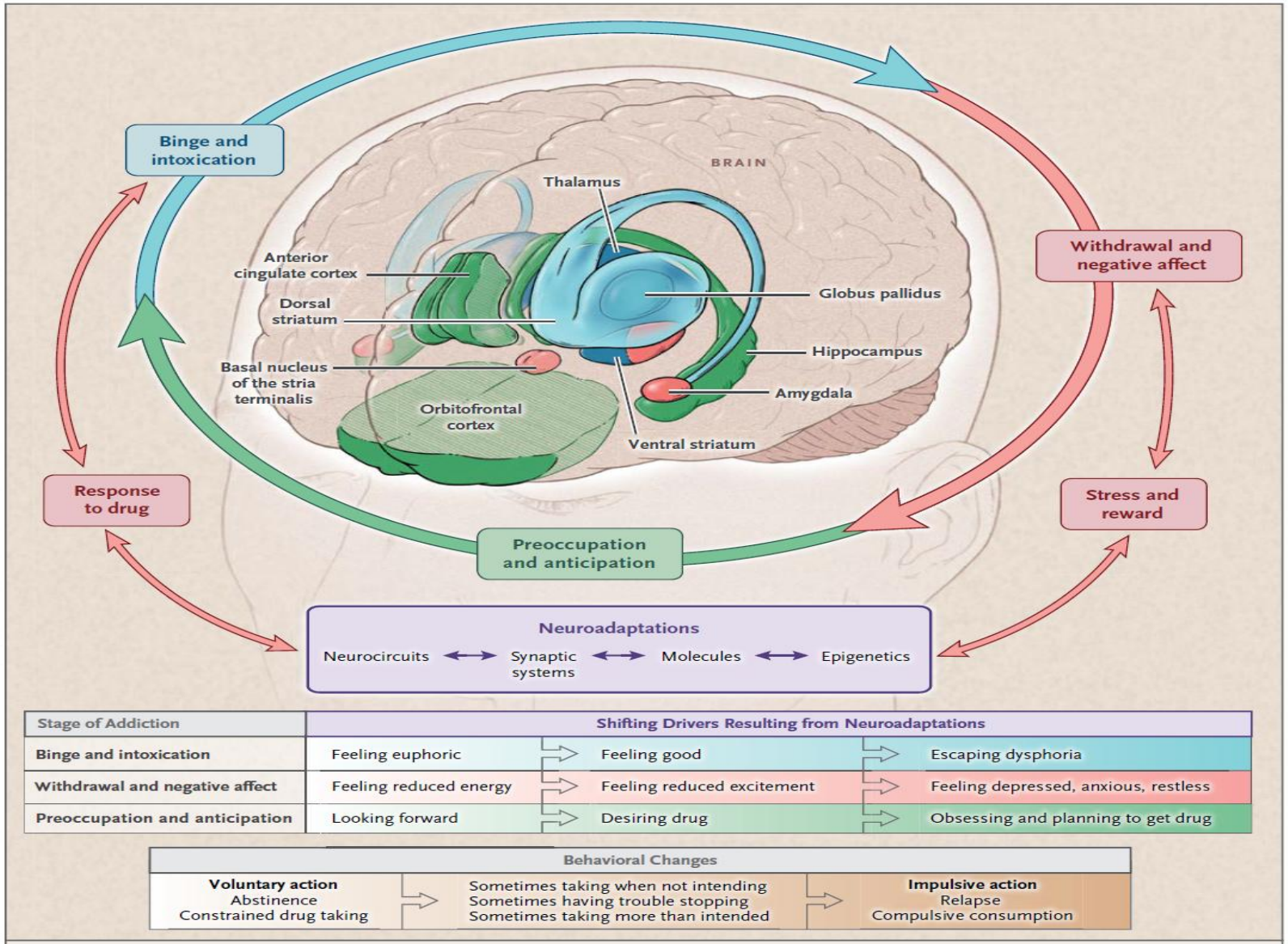
All of These Must Be Considered In Developing Strategies to Most Effectively Treat Addiction

Neurobiology of Addiction



From: Koob, G. F. and Volkow. N. D. Neurocircuitry of Addiction, Neuropsychopharmacology reviews 35 (2010) 217-238

Reward pathway



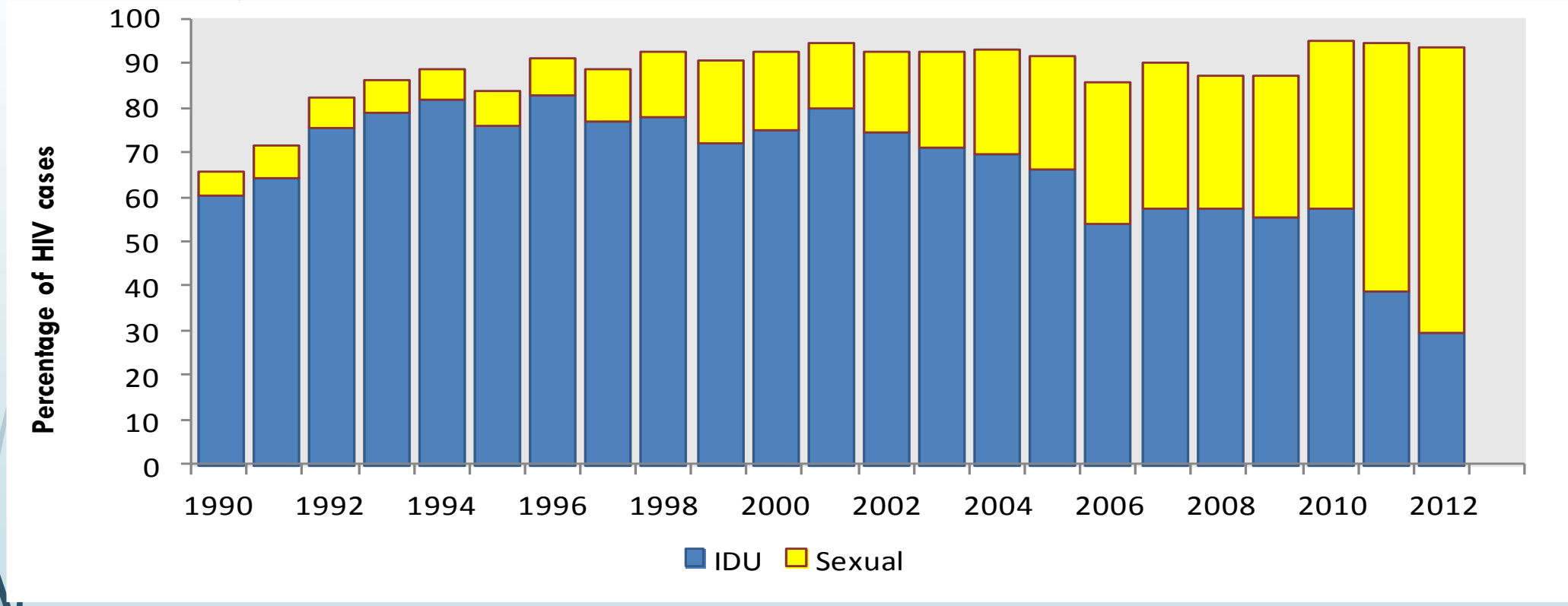
Stage of Addiction	Shifting Drivers Resulting from Neuroadaptations		
Binge and intoxication	Feeling euphoric	Feeling good	Escaping dysphoria
Withdrawal and negative affect	Feeling reduced energy	Feeling reduced excitement	Feeling depressed, anxious, restless
Preoccupation and anticipation	Looking forward	Desiring drug	Obsessing and planning to get drug

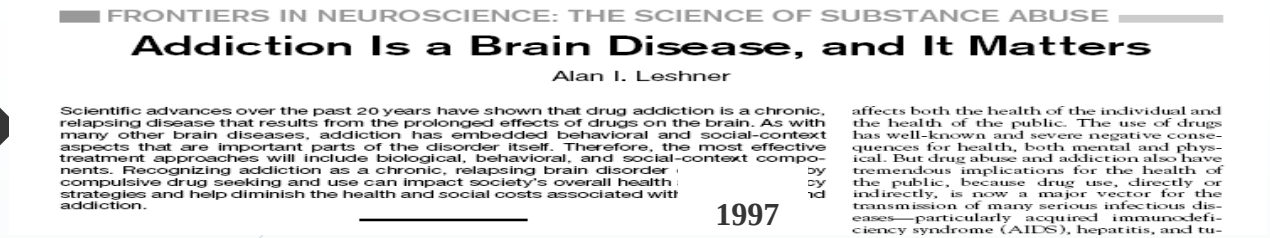
Behavioral Changes		
Voluntary action Abstinence Constrained drug taking	Sometimes taking when not intending Sometimes having trouble stopping Sometimes taking more than intended	**Impulsive action** Relapse Compulsive consumption

Figure 1. Stages of the Addiction Cycle.

During intoxication, drug-induced activation of the brain's reward regions (in blue) is enhanced by conditioned cues in areas of increased sensitization (in green). During withdrawal, the activation of brain regions involved in emotions (in pink) results in negative mood and enhanced sensitivity to stress. During preoccupation, the decreased function of the prefrontal cortex leads to an inability to balance the strong desire for the drug with the will to abstain, which triggers relapse and reinitiates the cycle of addiction. The compromised neurocircuitry reflects the disruption of the dopamine and glutamate systems and the stress-control systems of the brain, which are affected by corticotropin-releasing factor and dynorphin. The behaviors during the three stages of addiction change as a person transitions from drug experimentation to addiction as a function of the progressive neuroadaptations that occur in the brain.

Percentage of HIV transmission





FRONTIERS IN NEUROSCIENCE: THE SCIENCE OF SUBSTANCE ABUSE

Addiction Is a Brain Disease, and It Matters

Alan I. Leshner

Scientific advances over the past 20 years have shown that drug addiction is a chronic, relapsing disease that results from the prolonged effects of drugs on the brain. As with many other brain diseases, addiction has embedded behavioral and social-context aspects that are important parts of the disorder itself. Therefore, the most effective treatment approaches will include biological, behavioral, and social-context components. Recognizing addiction as a chronic, relapsing brain disorder [illegible] compulsive drug seeking and use can impact society's overall health [illegible] strategies and help diminish the health and social costs associated with addiction.

affects both the health of the individual and the health of the public. The use of drugs has well-known and severe negative consequences for health, both mental and physical. But drug abuse and addiction also have tremendous implications for the health of the public, because drug use, directly or indirectly, is now a major vector for the transmission of many serious infectious diseases—particularly acquired immunodeficiency syndrome (AIDS), hepatitis, and tu-

1997

- Strong genetic basis (40-80% heritability)
- Pengaruh genetik yang tinggi

- Proven neurobiological risk factors
- Pembuktian faktor risiko dalam neurobiological

- Consistent brain function abnormalities
- Ketidaknormalan fungsi otak yang konsisten atau berterusan

- Effective neurobiological interventions
- Intervensi neurobiological yang efektif atau berkesan

Diagnosis di dalam rujukan Diagnostic and Statistical Manual (DSM-5)

- Substance Use Disorder
- Substance Intoxication
- Substance Withdrawal
- Other Substance-Induced Disorders
- Unspecified Substance-Related Disorder

Opioid Use Disorder

A. A problematic pattern of opioid used leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:
   1. Opioids are often taken in larger amounts or over a longer period than was intended
   2. There is a persistent desire or unsuccessful efforts to cut down or control opioid use
   3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid or recover from its effects

Opioid Use Disorder

4. Craving, or a strong desire or urge to use opioids

5. Recurrent opioid use resulting in a failure to fulfil major role obligations at work, school or home

6. Continued opioid use despite having persistent or recurrent social or interpersonal problems

7. Important social, occupational or recreational activities are given up or reduced because of opioid

8. Recurrent opioid use in situations in which it is physically hazardous

Opioid Use Disorder

9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance

10. Tolerance, as defined by either of the following:

a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect

b. A markedly diminished effect with continued use of the same amount of an opioid

Opioid Use Disorder

11. Withdrawal, as manifested by either of the following:

    a. The characteristic opioid withdrawal syndrome

    b. Opioids (or a closely related substance) are taken to relieve or avoid withdrawal symptoms

In early remission – none of criteria present at least 3 months (except Craving is allowed)

In sustainned remission – non of criteria present at least 12 months (except craving)

On maintenance therapy

In a controlled environment

Kenapa perlu menggunakan atau mengambil kaedah bantuan ubat

- Pendekatan sebelum ini yang menggunakan pendekatan penyakit sosial (social ill) kurang berjaya
- Pengulangan (Relapse) adalah tinggi
- Mendedahkan mudarat yang tinggi kepada individu tersebut dan masyarakat persekitaran
- Mendedahkan kepada jenayah-jenayah lain

Bagaimana berdepan dengan Individu yang mengambil dadah

- Kerahsiaan (Confidentiality)
- Perasaan Empati
- Pendekatan tidak menghukum (Non-judgmental approach)
- Menerima autonomi pesakit (Accept patient's autonomy to make decisions (both good & bad ones))
- Membantu atau berkerja seiringan dengan individu tersebut untuk mencapai matlamat (Work **with** the patient to achieve outcomes)
  - how can you help the patient achieve their goals

Peringkat-peringkat dalam model perubahan dalam ketagihan (Stages of Change Model)

Pre-contemplation: People do not have major concerns regarding their drug use and are not interested in changing behaviour

Contemplation: People aware that there are both benefits and problems arising from their drug use, and are weighing up whether or not to make changes - or what those changes should be

Action: People are implementing strategies in order to change

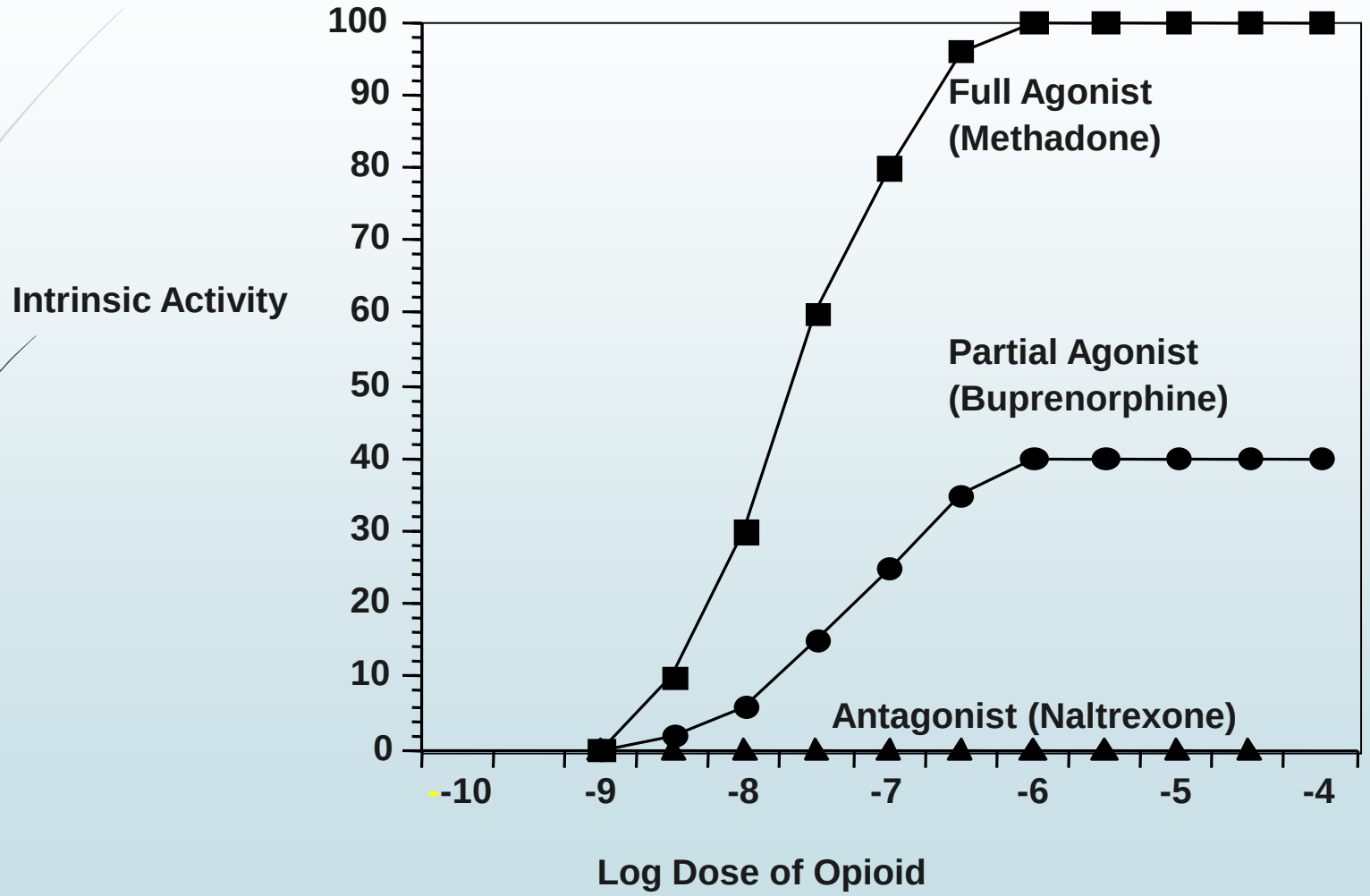
Maintenance: holding onto the behavior changes

Relapse: can be volitional, or triggered by physical, emotional, social factors

Jenis-jenis rawatan penagihan dengan bantuan ubatan

- Methadone
- Buprenorphine
- Naltrexone
- Ubat-ubat lain – benzodiazepines, implant naltrexone, bupropion
- Drug induced psychosis → Antipsychotic
- Drug induced mood disorder → Antidepressant

Intrinsic Activity: Full Agonist (Methadone), Partial Agonist (Buprenorphine), Antagonist (Naloxone)



Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence (Review)

Mattick RP, Breen C, Kimber J, Davoli M

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Main results

Eleven studies met the criteria for inclusion in this review, all were randomised clinical trials, two were double-blind. There were a total number of 1969 participants. The sequence generation was inadequate in one study, adequate in five studies and unclear in the remaining studies. The allocation of concealment was adequate in three studies and unclear in the remaining studies. Methadone appeared statistically significantly more effective than non-pharmacological approaches in retaining patients in treatment and in the suppression of heroin use as measured by self report and urine/hair analysis (6 RCTs, RR = 0.66 95% CI 0.56-0.78), but not statistically different in criminal activity (3 RCTs, RR=0.39; 95%CI: 0.12-1.25) or mortality (4 RCTs, RR=0.48; 95%CI: 0.10-2.39).

Authors' conclusions

Methadone is an effective maintenance therapy intervention for the treatment of heroin dependence as it retains patients in treatment and decreases heroin use better than treatments that do not utilise opioid replacement therapy. It does not show a statistically significant superior effect on criminal activity or mortality.

PLAIN LANGUAGE SUMMARY

Methadone maintenance therapy versus no opioid replacement therapy

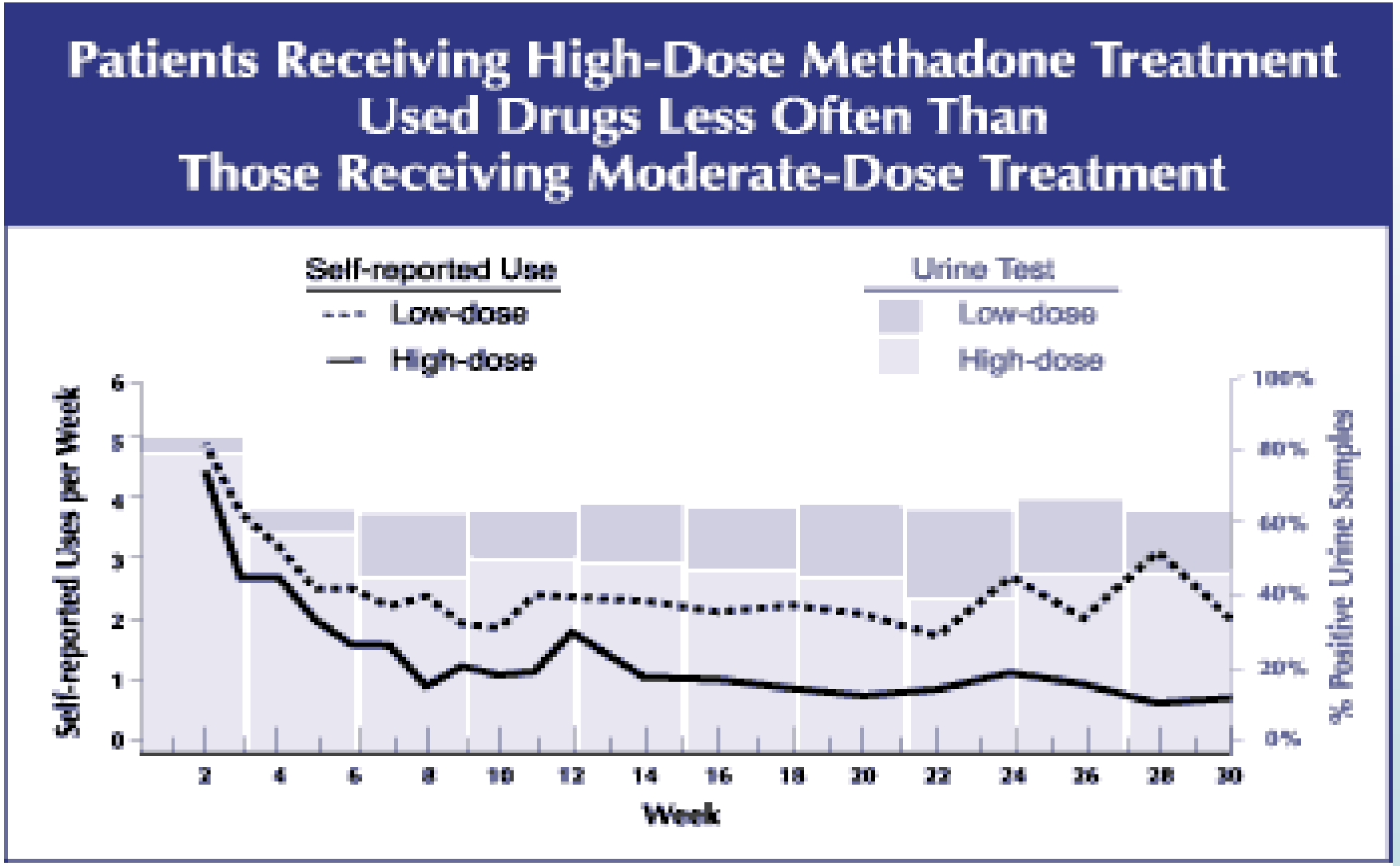
Methadone maintenance treatment can keep people who are dependent on heroin in treatment programs and reduce their use of heroin. Methadone is the most widely used replacement for heroin in medically-supported maintenance or detoxification programs. Several non-drug detoxification and rehabilitation methods are also used to try and help people withdraw from heroin. However the review found that people have withdrawn from trials when they are assigned to a drug-free program. Consequently, there are no trials comparing methadone maintenance treatment with drug-free methods other than methadone placebo trials, or comparing methadone maintenance with methadone for detoxification only. These trials show that methadone can reduce the use of heroin in dependent people, and keep them in treatment programs.

University of Malaya Center of Addiction Science UMCAS

Advantages of Opioid Agonist Maintenance Treatment--Rationale

- Substitute long-acting oral or sublingual medication (administered daily) for short-acting drug used by injection
- Steady-state plasma levels--no "rush," "nod" or withdrawal during maintenance
- Low daily doses (2-4 mg buprenorphine, 30-40 mg methadone) prevent withdrawal
- Higher daily doses (8-16 mg buprenorphine, 80-120 mg methadone) block craving, induce opiate tolerance and decrease rewarding effects of street heroin

Methadone dose effects: 40-50 mg. vs. 80-100 mg



Contents lists available at SciVerse ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Short communication

Methadone dose at the time of release from prison significantly influences retention in treatment: Implications from a pilot study of HIV-infected prisoners transitioning to the community in Malaysia

Jeffrey A. Wickersham[a,*], Muhammad Muhsin Zahari[b], Marwan M. Azar[a], Adeeba Kamarulzaman[a,b], Frederick L. Altice[a,b,c]

[a] Yale University School of Medicine, Department of Medicine, Infectious Diseases Section, AIDS Program, New Haven, CT, USA
[b] University of Malaya, Centre of Excellence for Research in AIDS, Kuala Lumpur, Malaysia
[c] Yale University School of Public Health, Division of Epidemiology of Microbial Diseases, New Haven, CT, USA

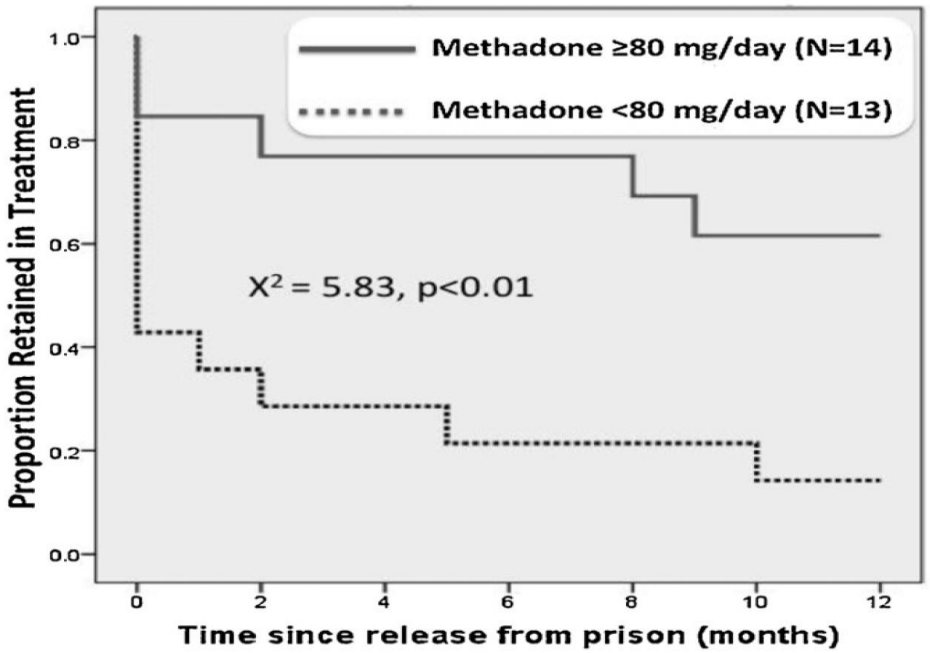


Fig. 1. Kaplan–Meier retention curve comparing prisoners released from prison ($N = 27$).

Side Effects of methadone

- Common during treatment initiation, and then tolerance develops to many side effects
- Some side effects can be difficult to differentiate from withdrawal symptoms
  - nausea, joint aches, sweating, poor sleep
  - time course is important
- Some side effects are chronic problems
  - constipation; sweating; sleep disturbances
  - endocrine changes (reduced libido, menstruation)
  - dental problems

Principles of treatment

- Comprehensive treatment program
  - Treatment the psychiatric illness
  - Treatment of substance dependency
  - Treatment of medical comorbidity
- Integrated or referrals to respective disciplines
- Collaborative and rehabilitative

Dual Diagnosis

Epidemiologic Catchment Area Study, lifetime any substance disorder – 16.7%

- 47.0% for people with schizophrenia
- 56.1% for people with bipolar disorder
- 27.2% for people with major depression
- 32.8% for people with obsessive–compulsive disorder

- **Psychosis is diagnosed when an individual develops hallucinations (unreal** sensory perceptions) and/or delusions (psychotic thoughts) without insight
- Delusion adalah apabila seseorang ada kepercayaan yang tidak benar atau tidak logik

Stimulant psychosis

- A high level of suspiciousness and paranoid delusion
- Auditory or tactile hallucination
- Labile mood
- Psychosis mimic schizophrenia or mania
- Psychosis almost always clear with cessation of stimulants

Rumusan

- Kaedah rawatan perubatan bagi perubatan membantu dalam menangani masalah ketagihan khususnya ketagihan dadah
- Rawatan yang diberi adalah mengikut kesesuaian individu, dan bukan *one fit for all*
- Elemen-elemen perawatan perlu diserapkan bagi memastikan kejayaan dalam rawatan
- Petunjuk-petunjuk (outcomes) menyokong bahawa kaedah *medication assisted therapy (terapi dengan bantuan ubat)* memberi kesan yang positif dan signifikan pagi proses pemberhentian ketagihan
- MAT memberi kesan positif kepada bukan sahaja kepada penagih, tetapi kepada masyarakat sekeliling juga

Terima kasih