Opiate Dependency
bka Opioid Addiction

GP CME
Dunedin
July 2012

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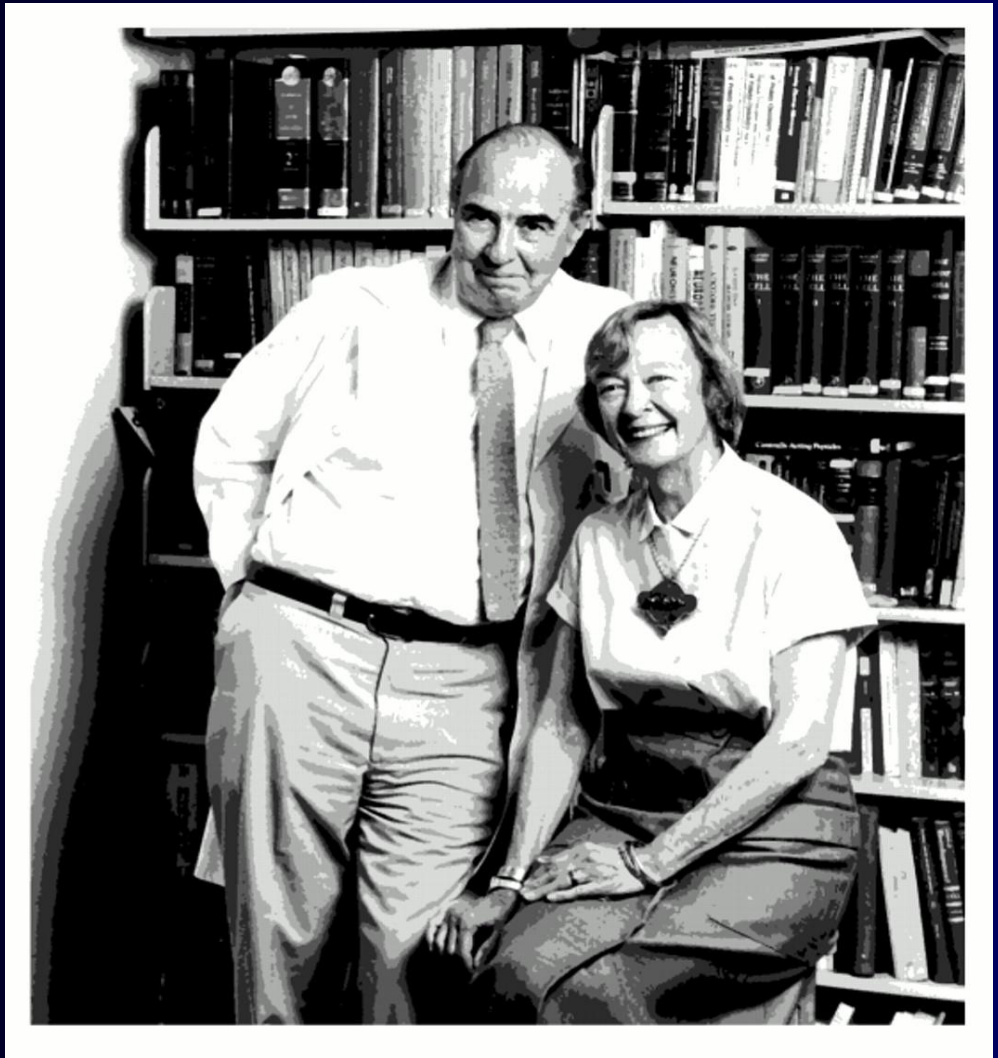
What this talk is about

- Therapeutic communities – No
- Ibogaine or other entheogenic treatment – No
- Opioid substitution treatment – Yes
  - objectives of OST
  - brief history
  - waiting lists and interim prescribing
  - buprenorphine
  - oxycodone
  - primary care taking a primary role in OST

OST Objectives
Clinical practice guidelines (2008)

- Contribute to the health, psychological and social functioning and wellbeing of clients/tangata whai ora and their families
- Reduce the spread of infectious diseases associated with injecting drug use, especially hepatitis B and C and HIV/AIDS
- Reduce the mortality and morbidity resulting from the misuse of opioid drugs
- Assist individuals to achieve a successful withdrawal from opioids
- Reduce episodes of other harmful drug use
- Reduce crime associated with opioid use
- Assist with recovery from opioid dependence and withdrawal from methadone, or other opioid substitute medicine, if appropriate and desired by the client/tangata whaiora.

Dr Vincent Dole (1913-2006)
Dr Marie Nyswander (1919-1986)



Dole & Nyswander Model (1964/65)

- **Metabolic disorder like diabetes**
- **Blockade dose of methadone to prevent *narcotic hunger*, typically 80 – 120mg**
- **A comprehensive, individualised programme of rehabilitation**
- **Prescription for as long as the patient is benefiting**

New Zealand pioneers

- Dr Fraser MacDonald – Auckland
- Dr John Dobson – Christchurch
- Dr Derry Seddon – Tauranga

- Mr John Hannifin – Palmerston North
  - First methadone conference 1979
  - National Protocol 1992

New Zealand issues: first 20 years

- **Opioid dependence: a disorder of the endogenous opioid system**
- **Methadone for opioid dependence in conflict with the abstinence model - "its like giving gin to alcoholics"**
- **HIV/AIDS: more life threatening than opioid dependence**
- **Opioid dependence and co-morbidity**
- **Determining an optimal dose of methadone**

(Sellman, Deering, Robinson 1995)

Methadone maintenance treatment: Coming of age in New Zealand

- Stabilisation, Rehabilitation, Community Reintegration, Withdrawal

- Total time about five to six years “if all goes smoothly”

1996 NAC Report
(waiting lists, health costs and "liquid handcuffs")

- 1340 OST patients (1992)
  2500 OST patients (1995)

- $4,400 MMT compared with $50,000+ prison

- Five models for MMT – cost-effectiveness analysis

Recommendation

- **"Integrated model" (80/20) recommended**
- **Pharmacological alternatives to methadone**

2001 NAC Report
(continuing waiting lists)

- 2500 OST patients (1995)
  3800 OST patients (1996)
  but waiting lists continued to grow

- Majority of programmes (SI) had a waiting time of at least nine months

Recommendation

- **Interim methadone programmes, to reduce waiting time to no more than two weeks**

“Perhaps the greatest problem facing those working in the field of methadone maintenance treatment (MMT) in New Zealand, is that of waiting lists for treatment.

Delay in starting treatment is contrary to the harm reduction principles on which MMT is founded, and exposes clients to ongoing harm”

Dr Alistair Dunn (2002)

The NZ Experience of IMP 2005

- Whangarei – Alistair Dunn
- Wanganui – Tracey Fear
- Palmerston North – Martin Schroder
- Nelson – Lee Nixon
- Christchurch – Elle King
- Dunedin – David Mellor

Ministry of Health National Guidelines: Interim methadone prescribing 2007

When there is a longer than two-week waiting list, that patients with established opioid dependence be given the choice of undertaking an interim methadone-prescribing programme, ideally by the patient's own general practitioner, up to a maximum of 60mg.

2008 NAC report
(review of MMT in light of P epidemic)

- Interim prescribing not being widely utilized
- Majority of programmes with waiting times > two weeks
- “Not ready” a new waiting list category in some jurisdictions

- 3800 OST patients (1996)
  4608 OST patients (2008)

- 25% GP (2008)
  - MOH goal of 50%
  - NAC recommendation 80%

- Barriers identified to accessing OST
- Buprenorphine recommended

The barriers to accessing OST

* OST staff and opioid users agreed:
  - Having to go on a waiting list
  - Restricted “takeaways”
  - Being tied to staying in one place
  - Having to go to a chemist every/most days

* Almost all services reported significant resource issues and barriers to the transfer of stable patients to primary care

The last four years

- Interim prescribing not widely utilized
- Many programmes still have waiting times > two weeks

- But increase in GP liaison, co-existing disorder competence, national collegiality (NAOTP)

- 4608 OST patients (2008)
  5018 OST patients (2012)

- 25% GP (2008) up to 29% (2012)

- Advocating for buprenorphine continued
- And now, Suboxone appears…

With Suboxone
A new era in OST is beginning

- No more opioid deaths
- No more medication diversion
- Co-existing disorders including antisocial personality disorder will virtually disappear
- Stigma will be quickly become a thing of the past and a new opioid addiction units will likely be built adjacent to all regional hospitals in New Zealand
- The government will soon be announcing a new stream of $500,000,000 funding for opioid service development to compensate for its underfunding of opioid addiction treatment over the past 40 years…

With Suboxone
A new era in OST is beginning

- OST for those who can't tolerate methadone
- Medication alternative will help normalize clinical practice (discussion, choice)
- Safety profile should facilitate interim prescribing – waiting times could easily become the same as for Tb (< two weeks)
- Greater flexibility possible – doubled up doses, more takeaway doses

Suboxone (buprenorphine/naloxone)

- Registered with Med Safe in 2005
- Listed 1st July 2012 on the Pharmaceutical Schedule
- Fully funded for detoxification and maintenance treatment in opiate dependent patients

Agonist or Antagonist?

- Full Agonist

  - binds to the receptor producing an almost linear increase in physiological effect

  eg Heroin, Methadone, Morphine

- Partial Agonist

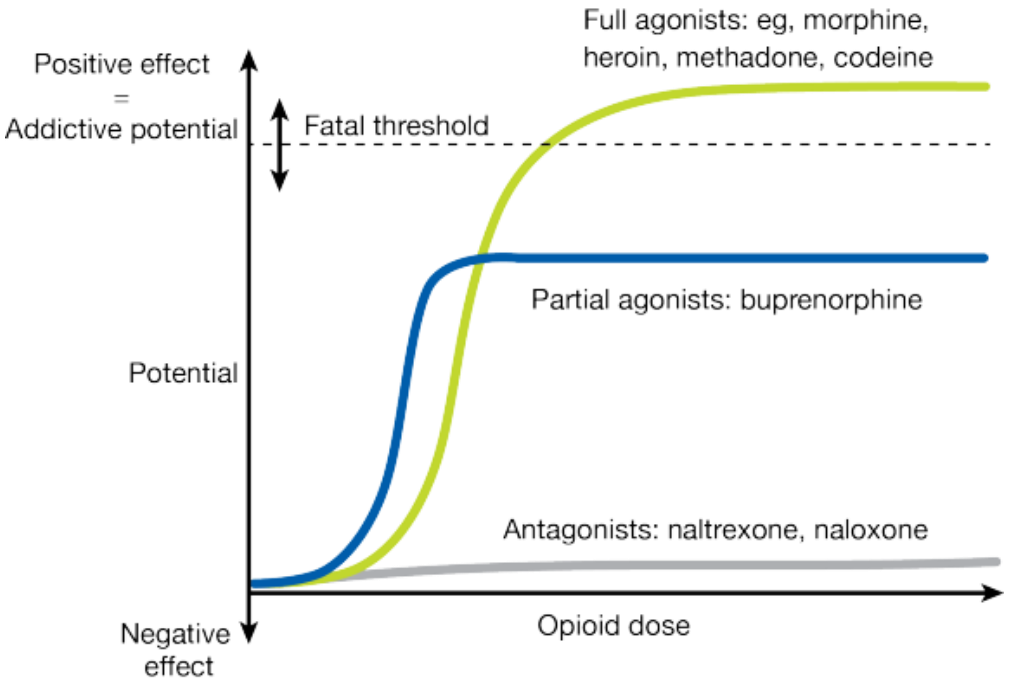
  - binds to the receptor but has a 'ceiling' effect on receptor activation

  eg Buprenorphine

- Antagonist

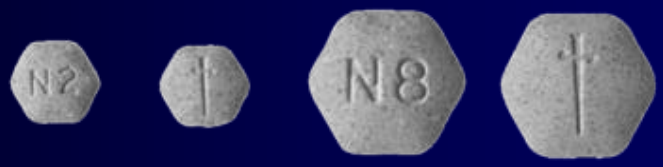
  - binds to the receptor but does not produce a biological response and is able to block agonist effects

  eg Naltrexone



Suboxone

- Combination sublingual tablet comprising of buprenorphine and naloxone in a 4:1 ratio
- Available as 2mg/0.5mg and 8mg/2mg sublingual tablets



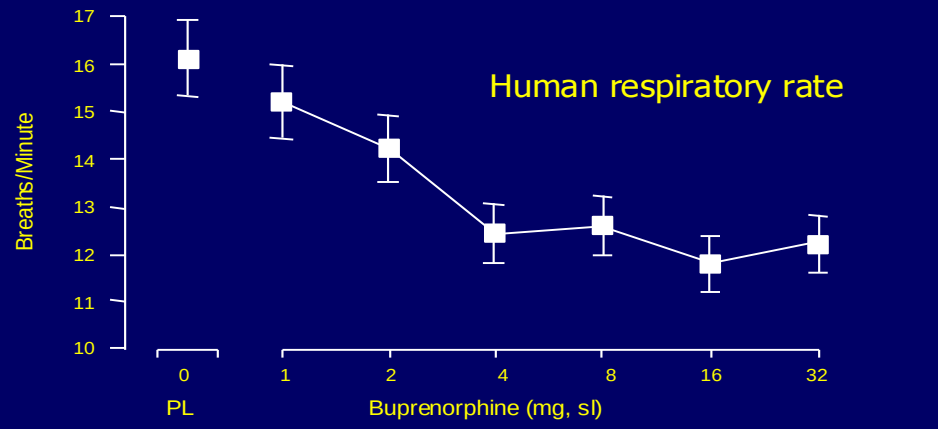
Buprenorphine Pharmacology

- Semi synthetic opioid
- Agonist (partial) for the *mu* (μ) opioid receptor and antagonist for the *kappa* (κ) receptor
- High affinity for the *mu* opiate receptor
  - Binds more tightly to the receptor than most other opiate agonists or antagonists
- Slow association and dissociation rate from the receptor
  - Long duration of action, low physical dependence liability, milder withdrawal
- Highly lipophilic

Ceiling Effect

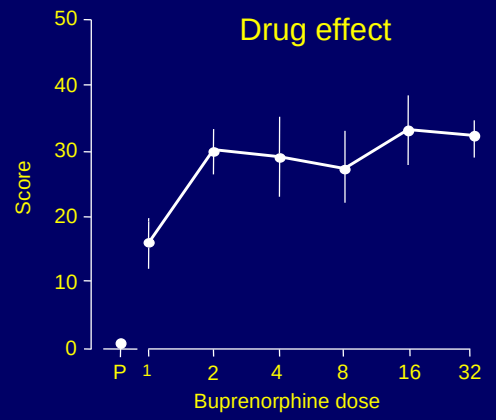
- Walsh *et al* (1994) demonstrated that buprenorphine has a ceiling effect for subjective 'drug liking' effects and respiratory depression, consistent with its partial agonist classification

Ceiling effect on respiratory depression



Adapted from Walsh et al., 1994

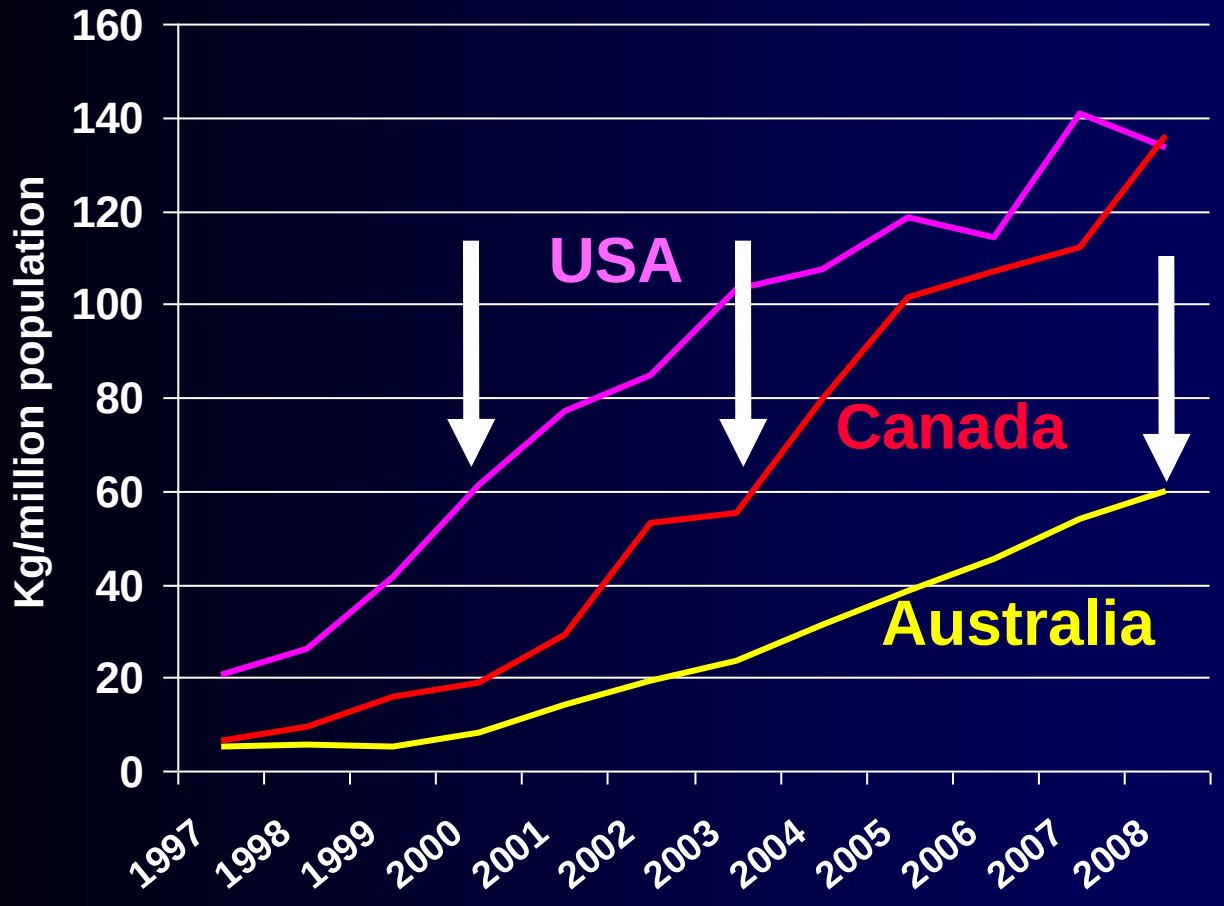
Subjective effects: "plateau"



Adapted from Walsh et al., 1994

Oxycodone

Per capita oxycodone base supply USA, Canada, Australia (1997-2008)



60 kg/million population

Source: INCB Tables of Reported Statistics, 2009, US Census Bureau int'l database

New Zealand (2006 – 2009)

Number of oxycodone prescriptions in NZ (Pharmaceutical Warehouse data)

Medicines Control
Ministry of Health

- *"This dramatic increase is difficult to explain on any grounds other than successful marketing by the drug companies . It has no clinical advantage over other agents already available in NZ."*

- *"Oxycodone should be considered a second line potent analgesic, for use only when morphine is not tolerated . The abuse potential is high: oxycodone is a potent analgesic with high dependence potential and is easily extracted from the long-acting formulation for intravenous use."*

Dr Adrian Gray

M Eslon 160mg	$1.49
LA Morphine 160mg	$1.57
Oxycontin 80mg	$2.49

Opioid addiction treatment

Where are we going?