

Seminar

“Association for Life and Disability Underwriting and Claims Professionals”

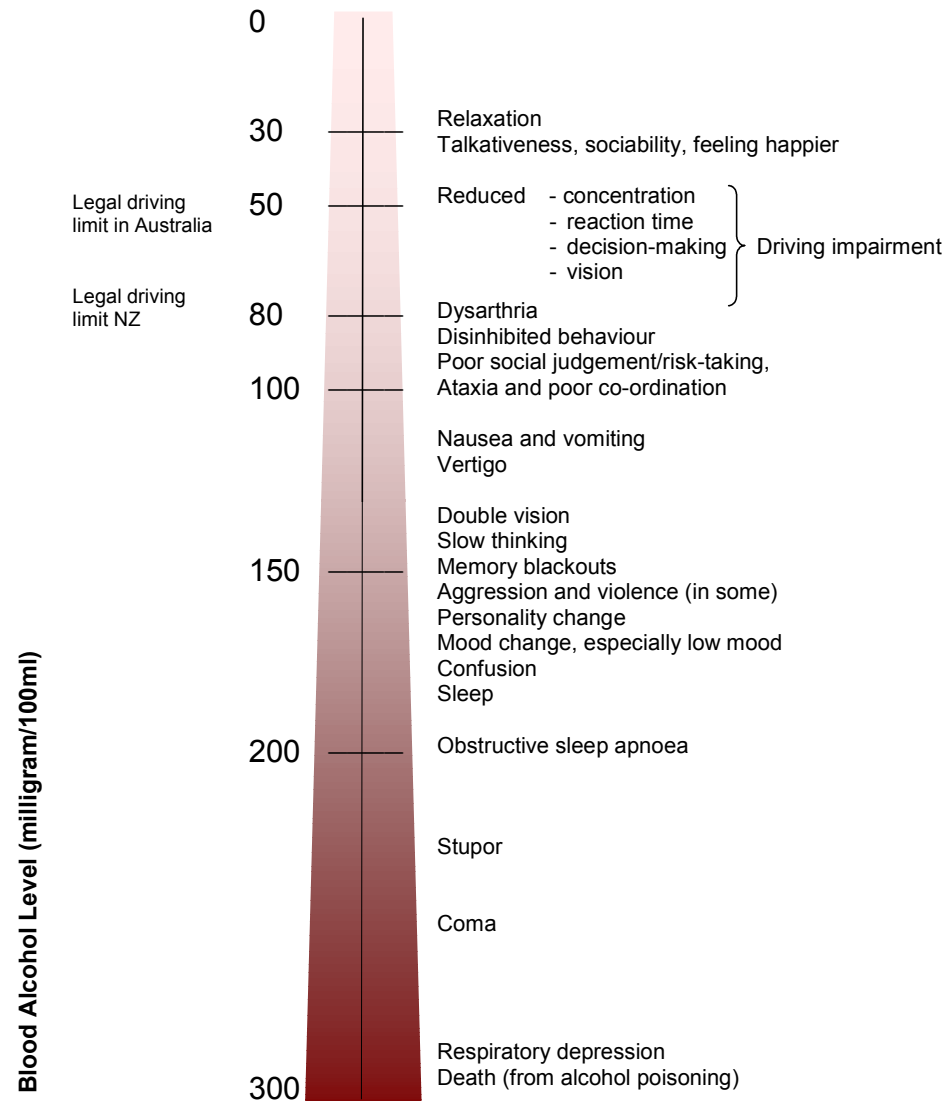
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Dr Geoff Robinson
CCDHB Alcohol/Drug Service

Alcohol and Drug Issues 1980-2011

1. (Alcohol intoxication)
2. Alcohol Dependence (and co-existing psychiatric disorders)
3. Prescription Drug Misuse
 - Opiates - (no heroin NZ 30 years)
 - HIV (contained)
 - Hepatitis C
4. Stimulants
5. Cannabis
6. Tobacco (5000 deaths/yr)

Figure 1: The effects of alcohol in non-tolerant persons



Ethanol Intoxication

Ethanol intoxication

Street descriptions

Drunk
Sloshed
Munted
Smashed
Stewed as a goose
Wiped out
Wasted
Chopped

Pissed
Out of it
Blind
Tipsy
Pickled
Trashed
Tanked

Shit-faced
Paralytic
Inebriated
Blotto
Totalled
Off your trolley
Ratted

Alcohol

- Surveys suggest 700,000 NZ population drink > 6 standard drinks once a week
- Drunkenness causes accidents, injuries violence and crime

30% offenders drinking

49% homicides

- Alcohol frequently involved
boating accidents
drownings
domestic lines

Acute intoxication harm exceeds that
of alcohol dependence which has
numerous physical and
psychological effects

Common medical problems associated with alcoholism

Psychological

Alcohol intoxication
Alcohol dependence
Alcohol withdrawal syndromes
Tobacco and other drug dependence
Depression and suicide
Anxiety

Gastrointestinal

Oesphagitis
Erosive gastritis
Disturbed small bowel mobility
Pancreatitis
Fatty liver
Alcoholic hepatitis
Cirrhosis

Respiratory

Obstructive sleep apnoea
Pneumonia
Pulmonary tuberculosis

Musculoskeletal

Chronic proximal myopathy
Osteoporosis

Increased carcinoma risk

Larynx
Oesophagus/stomach
Lung
Bowel
Breast

Neurological

Peripheral neuropathy
Cerebral atrophy and dementia
Cerebellar atrophy
Wernicke's-Korsakoff syndromes
Head injury (subdural haematoma)
Haemorrhagic stroke

Cardiovascular

Arrhythmias
Congestive cardiomyopathy
Hypertension

Haematological and nutritional

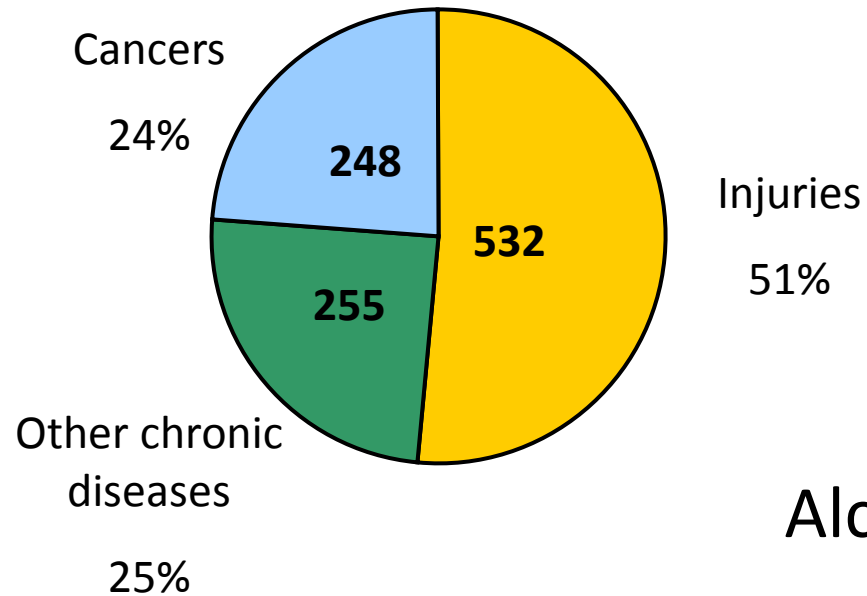
Macrocytosis
Thrombocytopenia
Folate deficiency
Impaired leucocyte response to infection
Hypokalaemia

Trauma

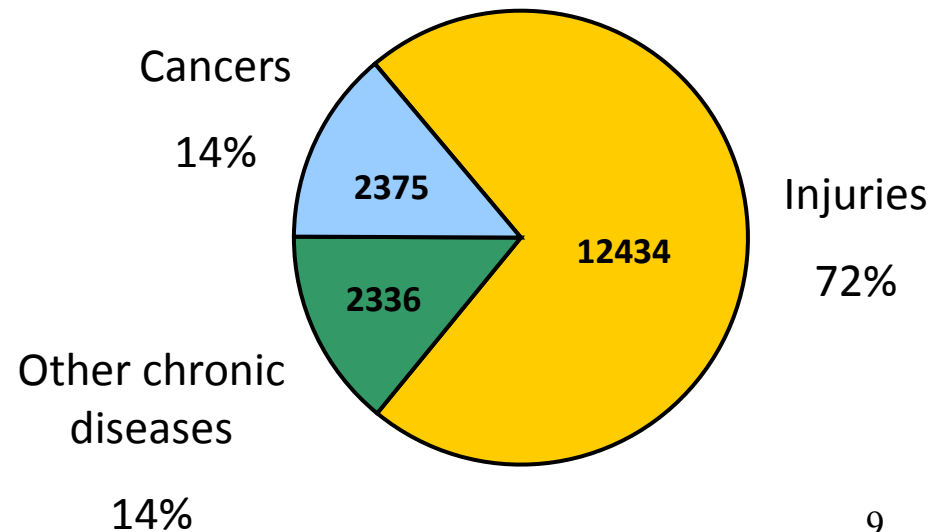
Alcohol withdrawal

- The most dangerous drug from which to withdraw
 - seizures
 - hallucinations
 - delirium

Alcohol-related deaths (n = 1037)



Alcohol-related years of life lost



The New Zealand Way of Life

- 25% of New Zealand drinkers are heavy drinkers
- A third of all police apprehensions involve alcohol
- Half of serious violent crimes relate to alcohol
- 60 different medical conditions caused by heavy drinking
- Up to 75% of adult presentations at Emergency Departments on Thursday, Friday and Saturday nights are alcohol-related
- Over 300 alcohol-related offences every day
- Over 500 serious and fatal injury traffic crashes every year
- At least 600 children born each year with fetal alcohol spectrum disorder
- Over 1000 alcohol deaths every year
- More than 17,000 years of life per year lost through alcohol

*“If alcohol were a
communicable disease,
a national emergency would be
declared”*

Dr William C Menninger (1957)

Six medical things the alcohol industry won't tell you about alcohol

1. Alcohol is a highly intoxicating drug with a relatively low safety index
2. Alcohol is a neurotoxin which can cause brain damage
3. Alcohol can directly cause aggression
4. Alcohol is fattening in moderate drinkers
5. Alcohol can cause cancer
6. Alcohol cardio-protection has been talked up

Three more things the alcohol industry *definitely* won't tell you about alcohol

7. The alcohol industry actively markets alcohol to young people
8. Low risk drinking means drinking low amounts of alcohol
9. A lot of the alcohol industry's profit comes from heavy drinking

Expert Advisory Committee on Drugs' criteria applied to alcohol

(Sellman, Robinson, Beasley 2009)

Class A: (Very High Risk)

heroin, cocaine, methamphetamine

Class B: (High Risk)

morphine , ecstasy, d-amphetamine,
GHB, (ethanol)

Class C: (Moderate Risk)

cannabis, benzodiazepines, BZP

The 5+ Solution

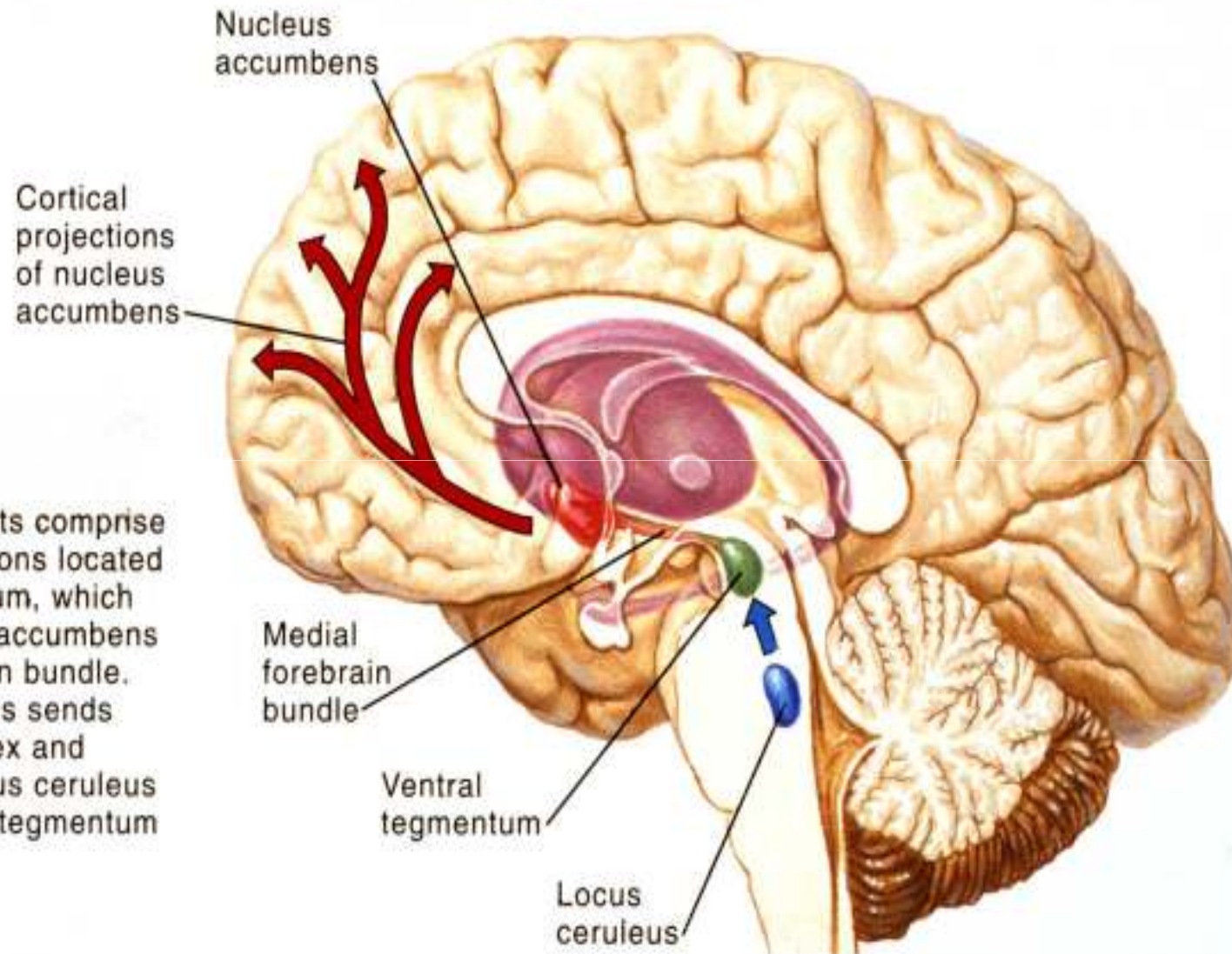
1. Raise alcohol prices
2. Raise the purchase age
3. Reduce alcohol accessibility
4. Reduce marketing and advertising
5. Increase drink-driving counter-measures

PLUS: Increase treatment opportunities for heavy drinkers

Based on Babor et al (2003)
Confirmed by Anderson et al (2009)

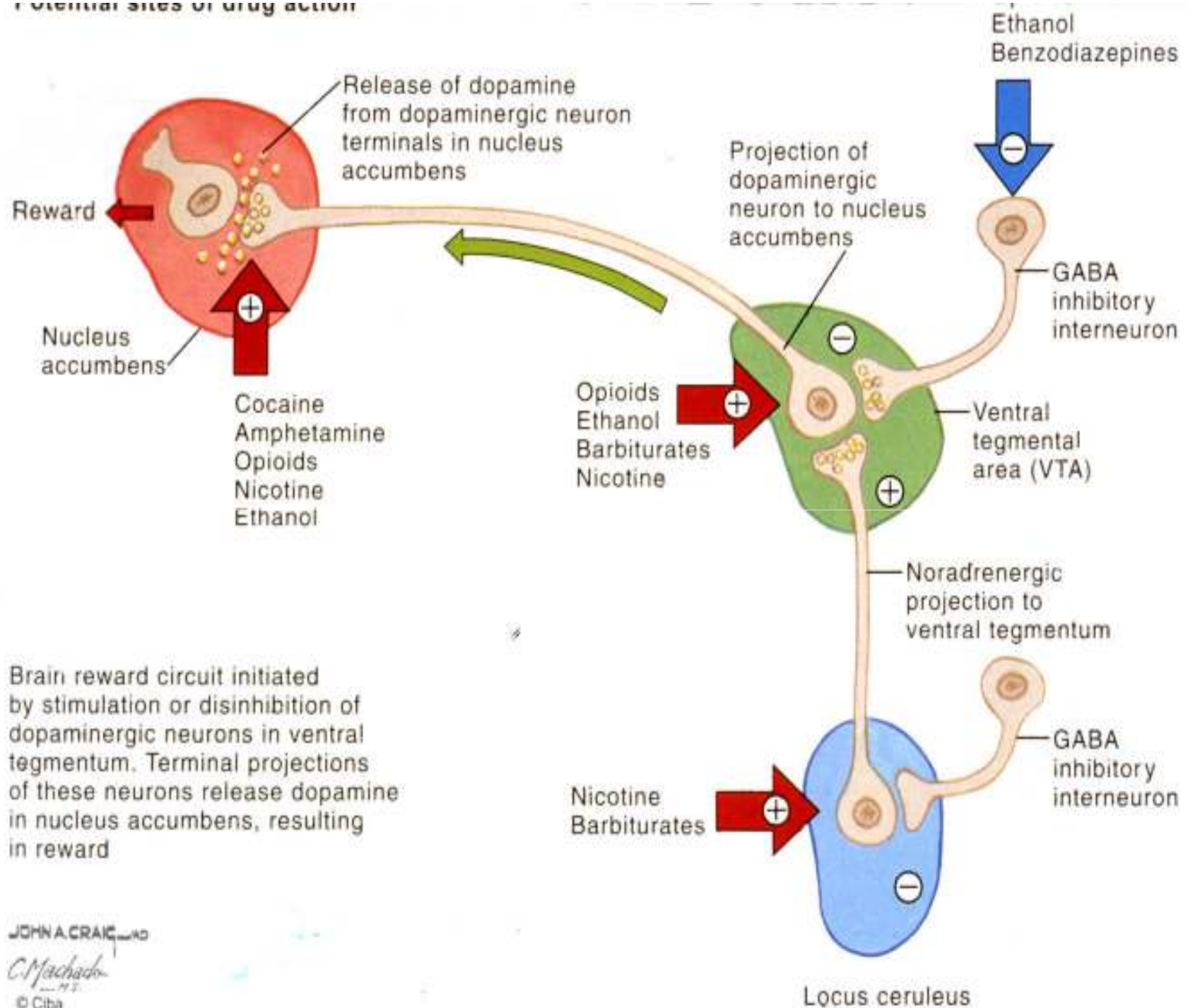
Brain Reward Circuit

Midbrain



Brain reward circuits comprise dopaminergic neurons located in ventral tegmentum, which project to nucleus accumbens via medial forebrain bundle. Nucleus accumbens sends projections to cortex and other centers. Locus ceruleus projects to ventral tegmentum

Potential sites of drug action





INJECTING DRUG USE

- Opioids
- Methamphetamine
- + Temazepam (previously)

BLOOD-BONE VIRUS INFECTION

HCV - 80%

HBV – 5%

HIV – 1.5%

Intravenous Drug Use

Death Rates NZ

↑11.5 under age 25

↑ 5.8 age 25 – 34

(suicide, accidental death, infection,
overdose)

(Robinson, 1992)

Since then: HIV

+ Hepatitis C

Street Patterns Overview NZ

1970 – 1979 plentiful heroin/palfium

1980

buprenorphine

dextropropoxyphene



codeine→homebaked→morphine

morphine LA

2007

methadone

Various patterns of opioid use to supplement diverted prescription drugs

- **Codeine 'homebaked' to morphine/heroin**
- **Opium from local poppies**
- **Opium from poppy-seed tea (60mg morphine/kg)**
- **OTC Codeine (in combination)**





Papaver somniferum

Street drug prices in this survey

Morphine 56¢/mg

Methadone 81¢/mg

Mean \$367/week - reduced

OPIOID DEPENDENCY ASSOCIATED WITH MULTIPLE CO- MORBIDITIES

- Personality disorders 15%
- Anxiety 15%
- Other drug dependencies
 - cannabis
 - tobacco
 - alcohol
 - benzodiazepines
- Poor nutrition hepatitis
- Depression
- PTSD/abuse
- Chronic

COMPLICATIONS OF INJECTING DRUG USE

Poor Injecting Technique

- Abscess
- Cellulitis
- Thrombophlebitis
- Arterial puncture
- Deep vein thrombosis

Needle Sharing

- Hepatitis B and C
- HIV or AIDS

Drug content or contaminants

- Abscess
- Overdose
- Gangrene
- Thrombosis

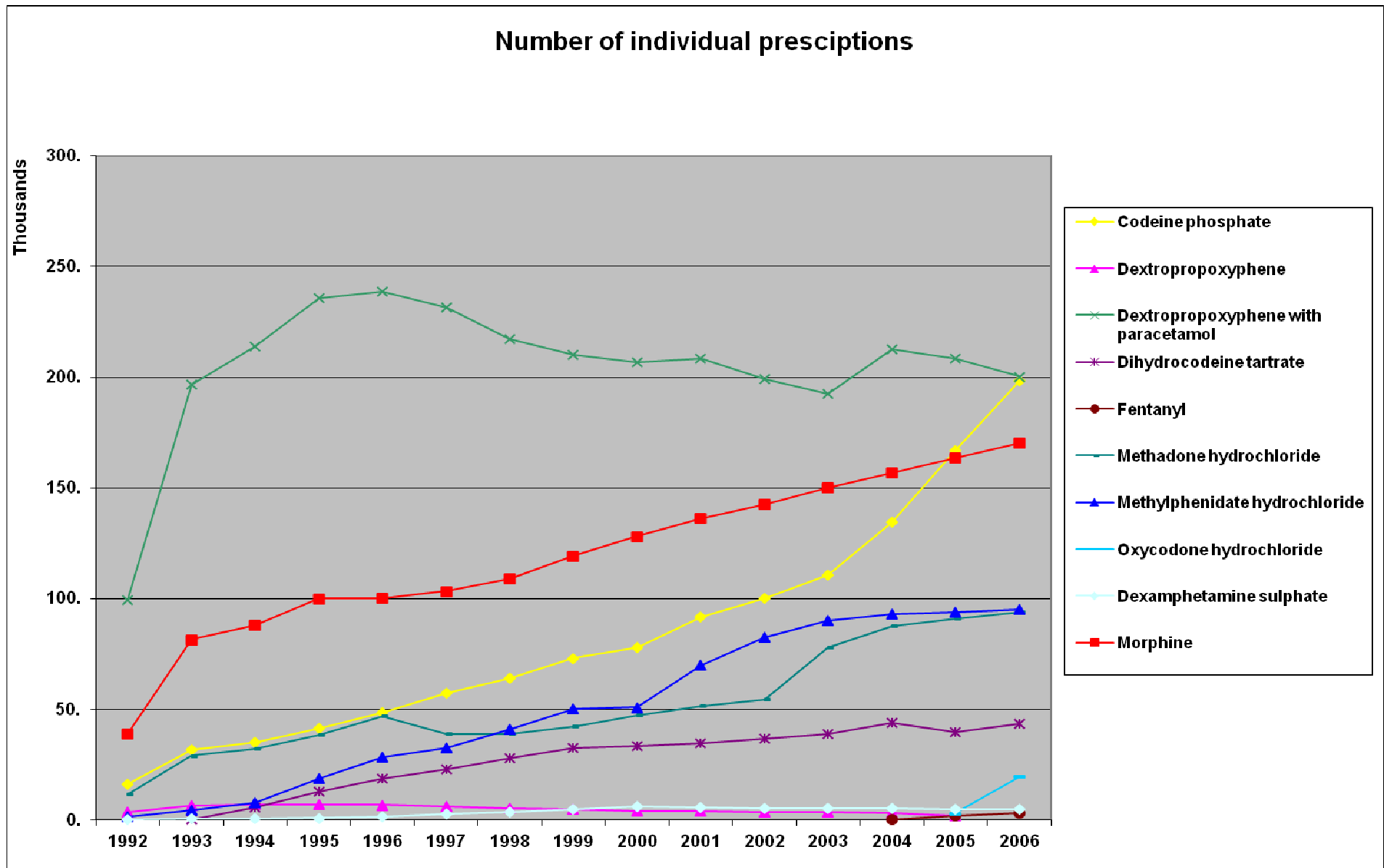
Opioid deaths in NZ

N = 150/year

Methadone/morphine/dextropropoxyphene

**Methadone 'takeaways' from drug clinics:
complex issue**

Prescribing of opioids in NZ



Understanding Sources of Diversion

(Gibson et al, 2004)

- **Patients**
- **Healthcare employees**
- **Doctor-shoppers**
- **Forgery (NZ H 572)**
- **Pharmacy break-ins**
- **?importation of pharmaceutical opioids**

Plea: “law-enforcement, pharmacies, clinicians and patients should continue their efforts to improve pain management while exercising care so that diversion of opioid medications for non-medical use is minimised”

DESIRED RESPONSE FROM METHADONE IN METHADONE MAINTENANCE TREATMENT

- Prevention of onset of withdrawal syndrome for 24 hours or more
- Reduction or elimination of drug hunger or craving
- Blockade of euphoric effects of illicit narcotics

SOURCE: Kreek₃1987

ACUTE EFFECTS OF METAMPHETAMINE

- Euphoria
- Decrease fatigue
- Decrease need for sleep
- Increase feelings of sexuality
- Interfere with normal sleep patterns
- Decrease appetite
- Grandiosity
- Pressured speech

PSYCHOLOGICAL ISSUES IN METHAMPHETAMINE USE

- MA dependency
- Poly drug use/dependency
- Anxiety/agitation
- Violence and aggression
- Paranoia
- Psychosis (visual/auditory hallucinations)
- Delusions (formication)
- Withdrawal (“crash”) (depression, irritability, fatigue)
- Worsening of existing mental health disorders

DRUG RELATED DEATHS (NZ)

- Injecting drug use < 150 per annum
- Alcohol-related 1000
- Tobacco-related 4500