

*Australia's ageing population:  
Implications for alcohol and other drug prevention  
and treatment services.*

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THE UNIVERSITY OF  
SYDNEY



# Key points



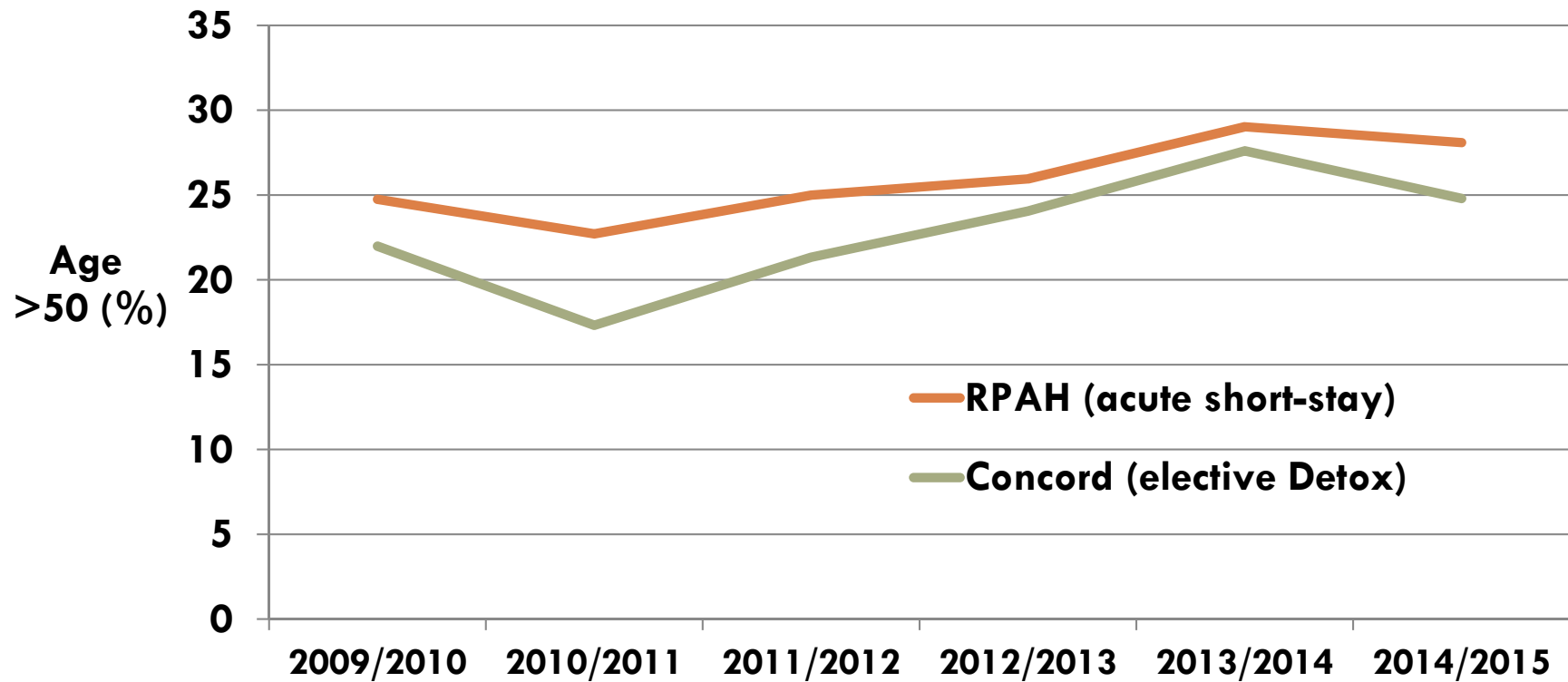
- Alcohol and other drug services are experiencing an ageing of their existing client base and an influx of older clients.
- More complex co-morbidities and other problems and may have different patterns of use.
- Particular challenges for the provision of alcohol and other drug services will be examined.

# What are the clinical challenges?

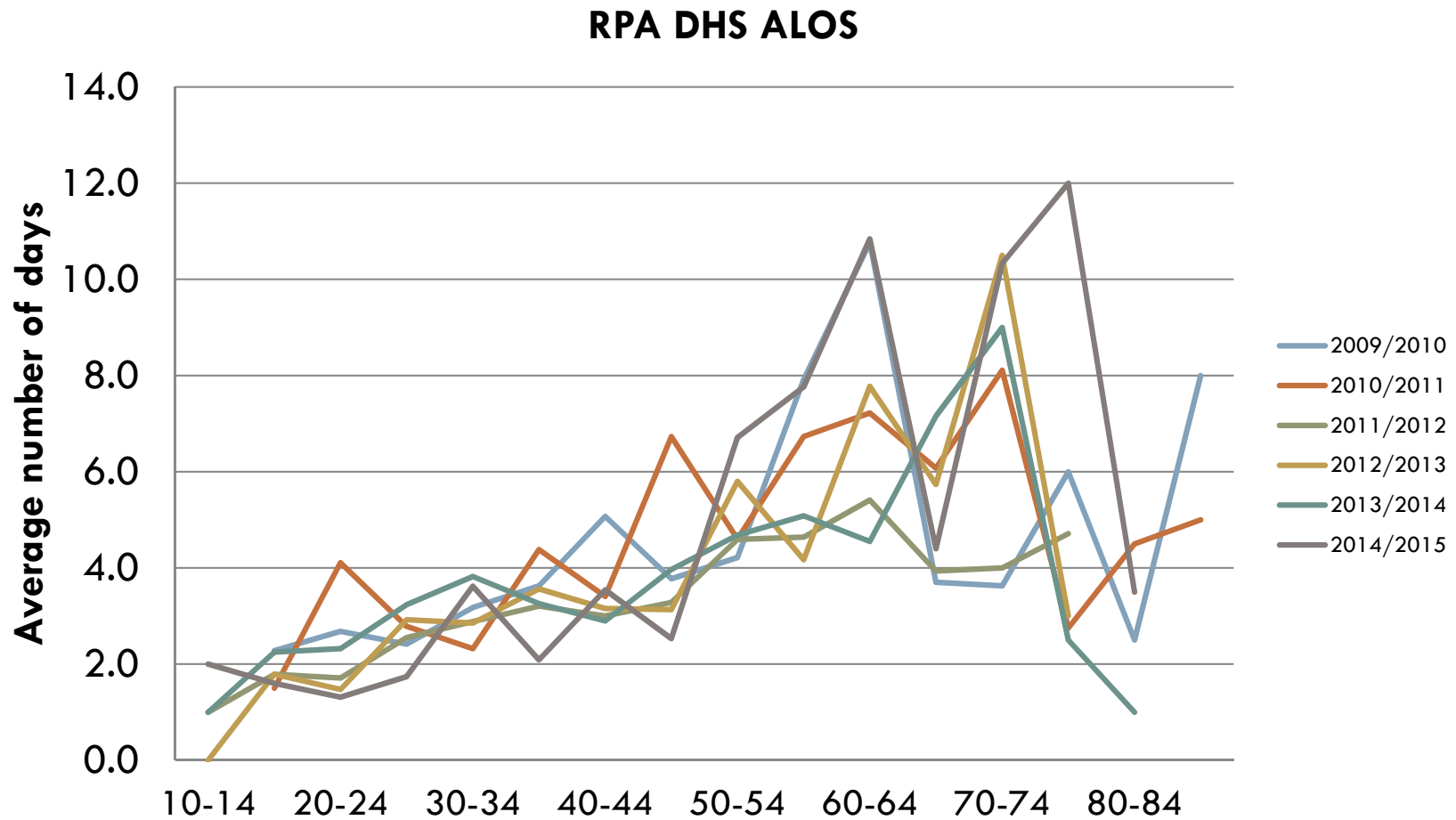


- Medical issues
- Cognitive issues
- Psychosocial issues
- Risk assessment/harm reduction

# Ageing inpatient cohort



# Implications for inpatient services



# Older people tend:

- to have multiple co morbidities
  - ▣ IDDM, CAL, CHF etc
  
- to be on multiple medications
  
- to use more OTC medications
  
- to present with non-specific symptoms
  - ▣ eg confusion with UTI rather than dysuria.

# Inpatient concerns



- Complex comorbidities
  - Delerium
  - Severe cognitive dysfunction (guardianship?)
  - Homeless exit-blocked patients with placement problems
  
- Mobility
  - Increasing falls in hospital
  - Problem with stairs (need to modify wards, residential services)

# Clinical challenge

- Age <65 (!)
- Placement problems
  - ▣ Extended hospital stay >60 days [=cancel 15 other cases]
  - ▣ Duty of care : unable to discharge, bed block
  - ▣ Not funded by aged care or ABF
- No social support
- Insightless to disorder and/or capacity for self-care
  - ▣ Difficult nursing with absconding and “code black” risks
- Diagnoses
  - ▣ Alcohol related brain damage
  - ▣ Opioid dependent with chronic pain and complex orthopaedic complications



# *Solutions for inpatient services?*



## ***Undertake Clinical Redesign to***

- Improve inpatient addiction medicine services
- Establish units in larger hospitals
- Strengthen consultation-liaison services
- Build community links/ambulatory care to reduce readmission

## SUBSTANCE USE PATTERNS IN OLDER AGE GROUPS

Alcohol and illicit substance use,  
people aged 55 years and over, 2010 (percent)

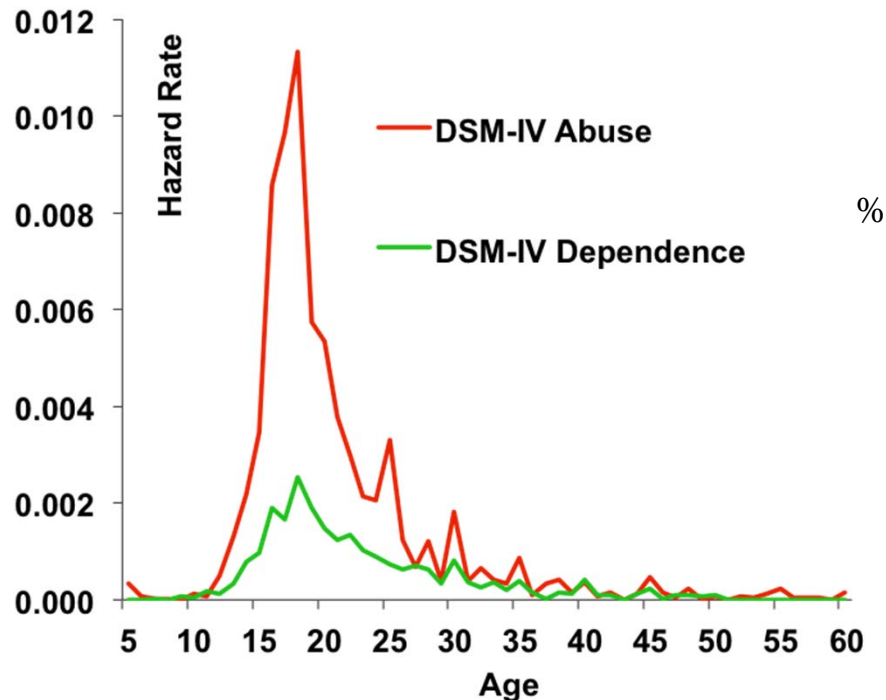
Substance Use Status	Age group (years)		
	55-64	65-74	75+
<i>Daily alcohol</i>	11.3	14.6	14.8
<i>Weekly alcohol</i>	42.5	35.1	27.5
<i>Less than weekly alcohol</i>	28.1	26.8	24.8
<i>Recent any illicit*</i>	6.6	4.1	6.5
<i>Recent any illicit excluding THC*</i>	3.8	4	6.4

SOURCE: 2010 National Household Survey

# Alcohol Disorders in Australia

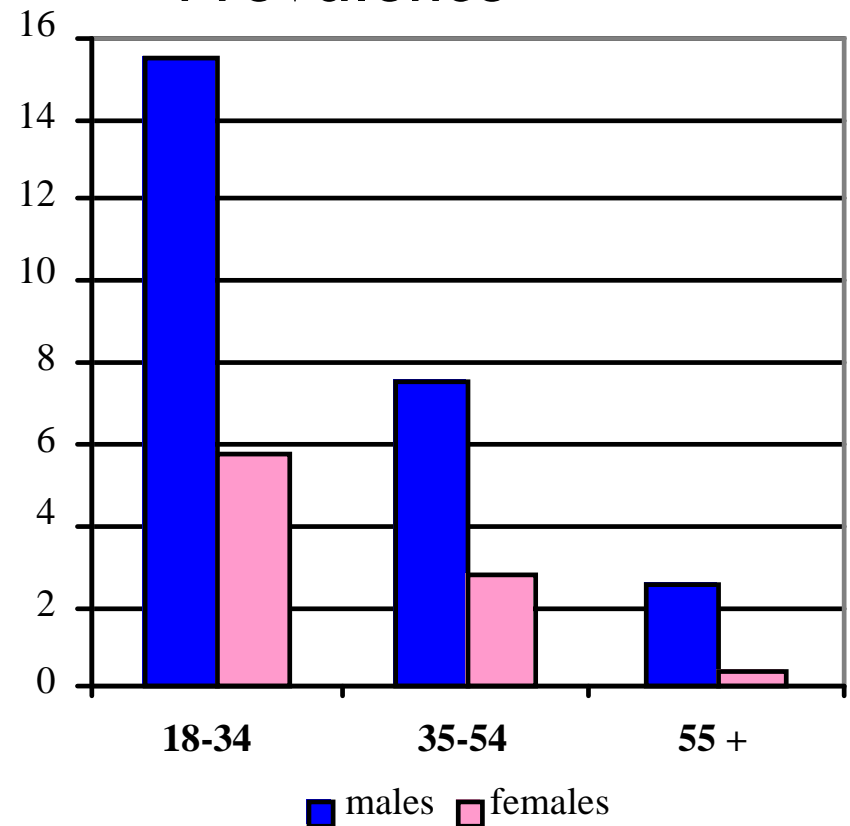
## National survey of mental health and well-being

### Incidence



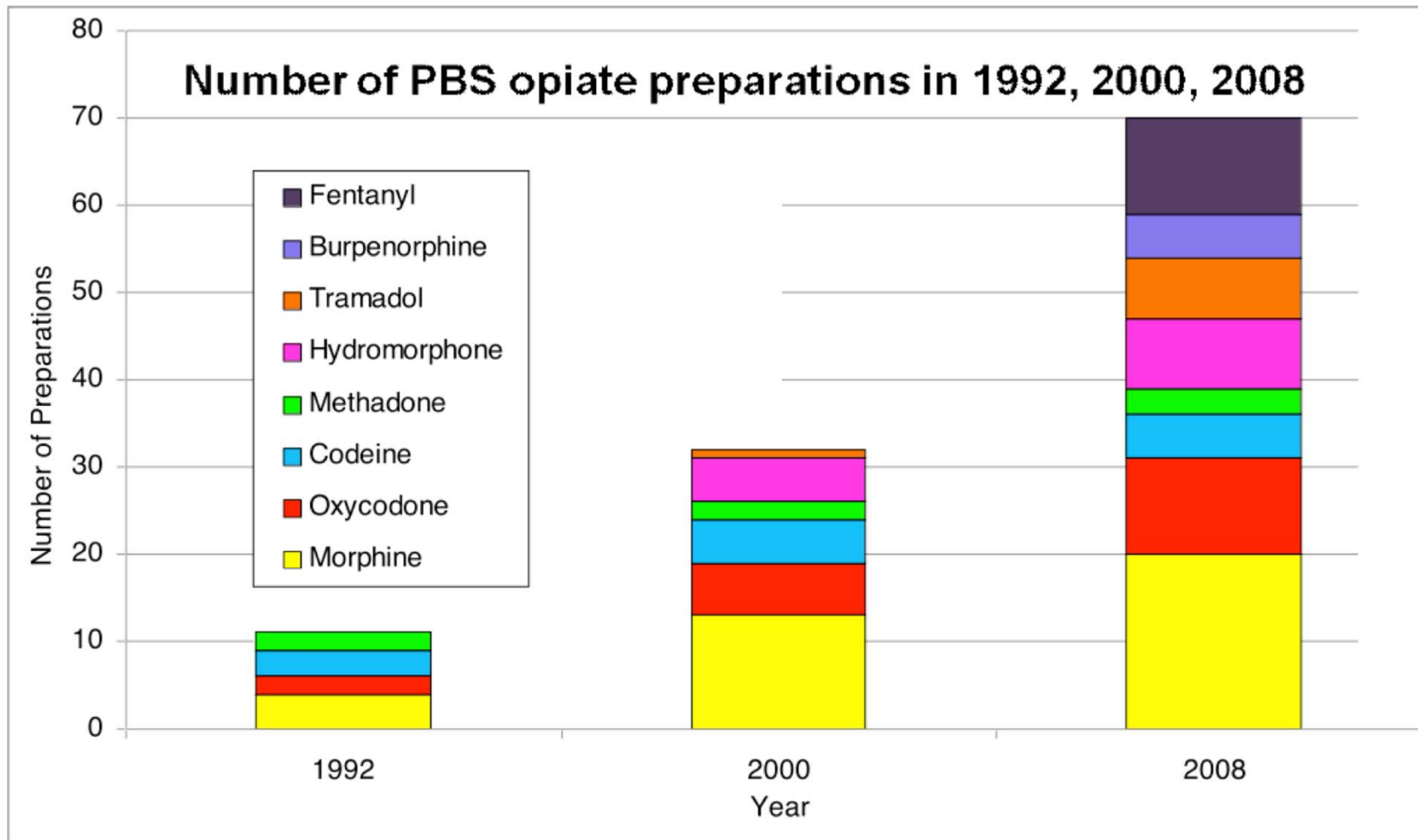
*Teesson et al, 2014*

### Prevalence

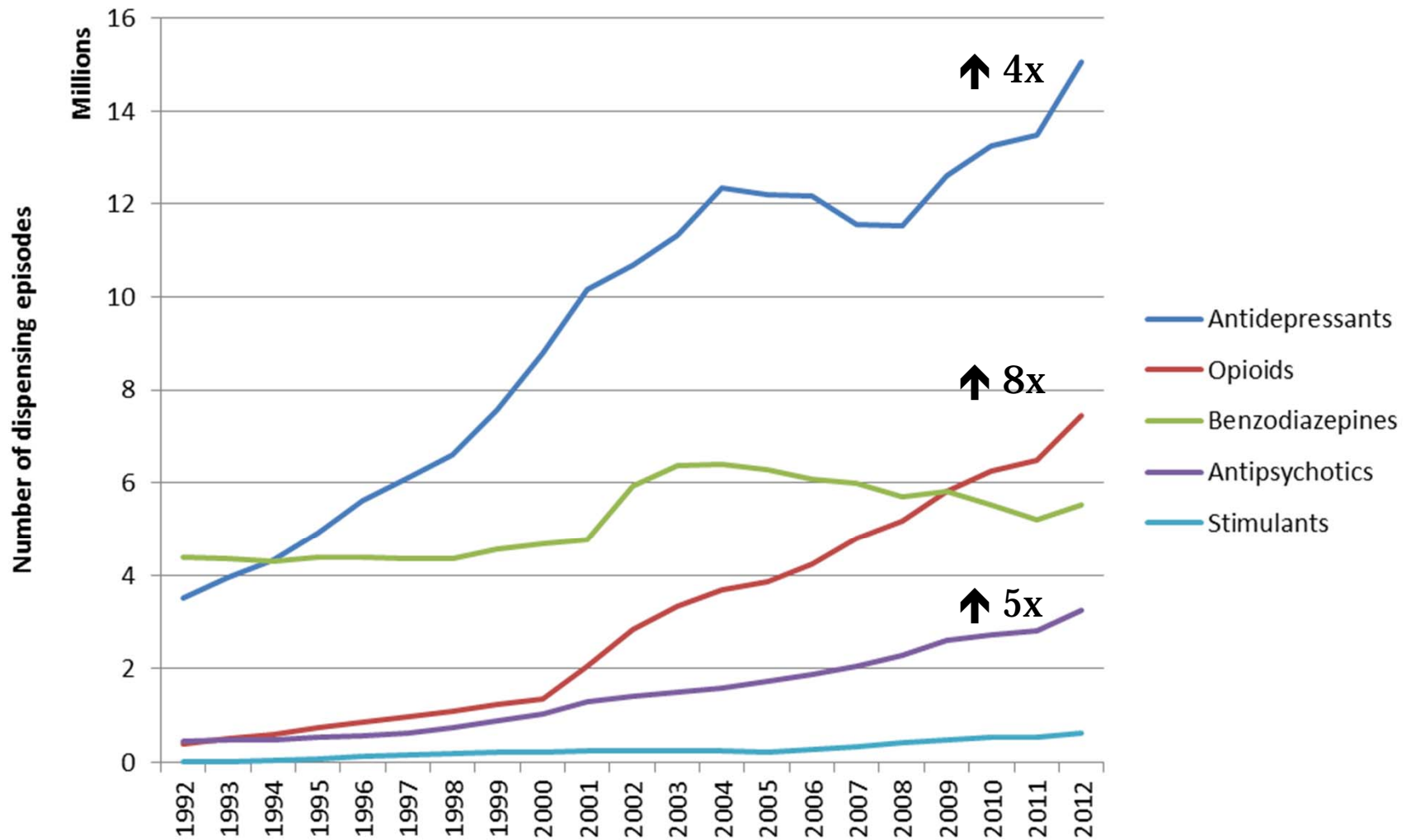


*Teesson et al, 2000 ANZJP*

# *Spoilt for choice!*

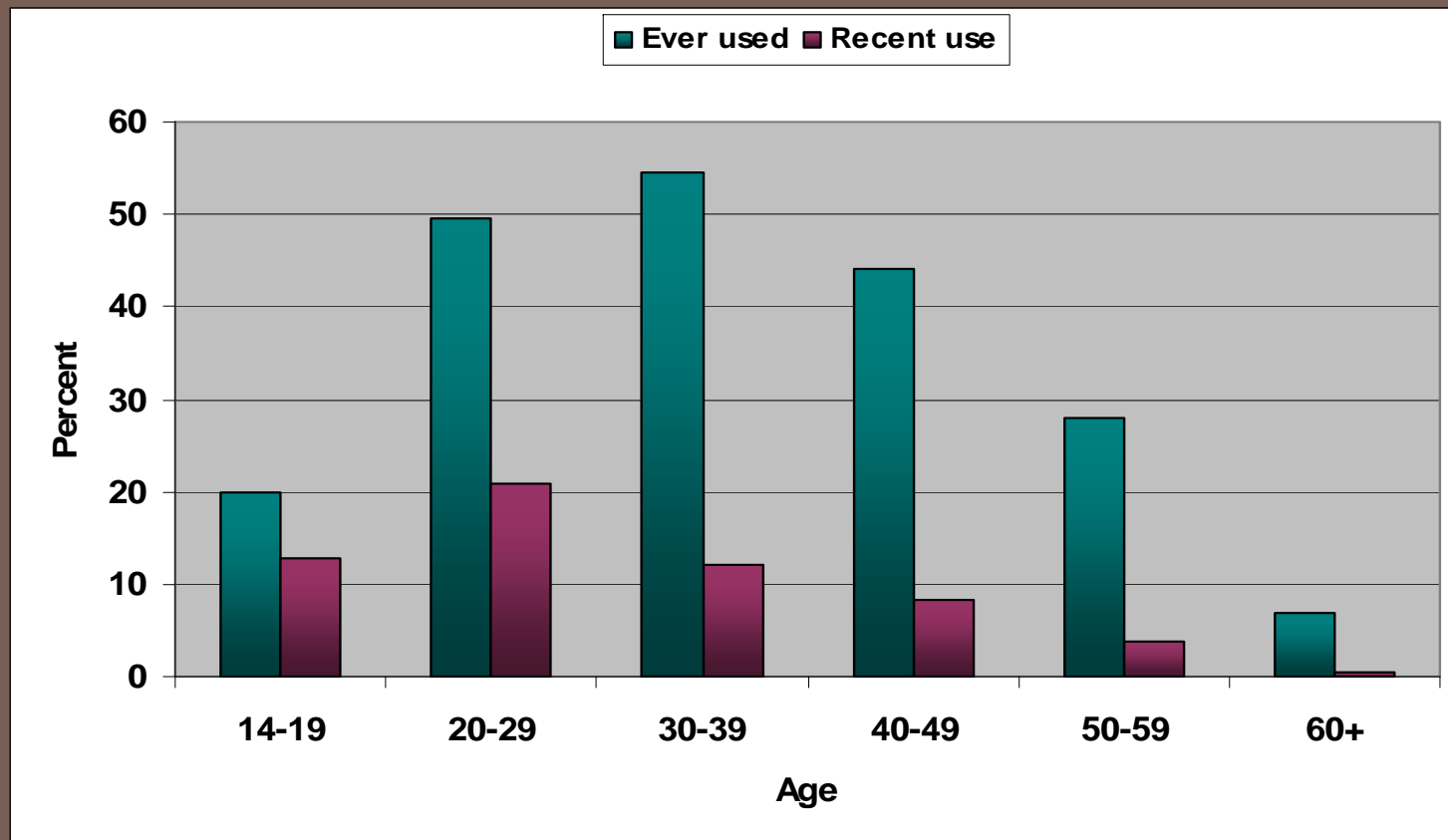


## Number of dispensing episodes and medicine class

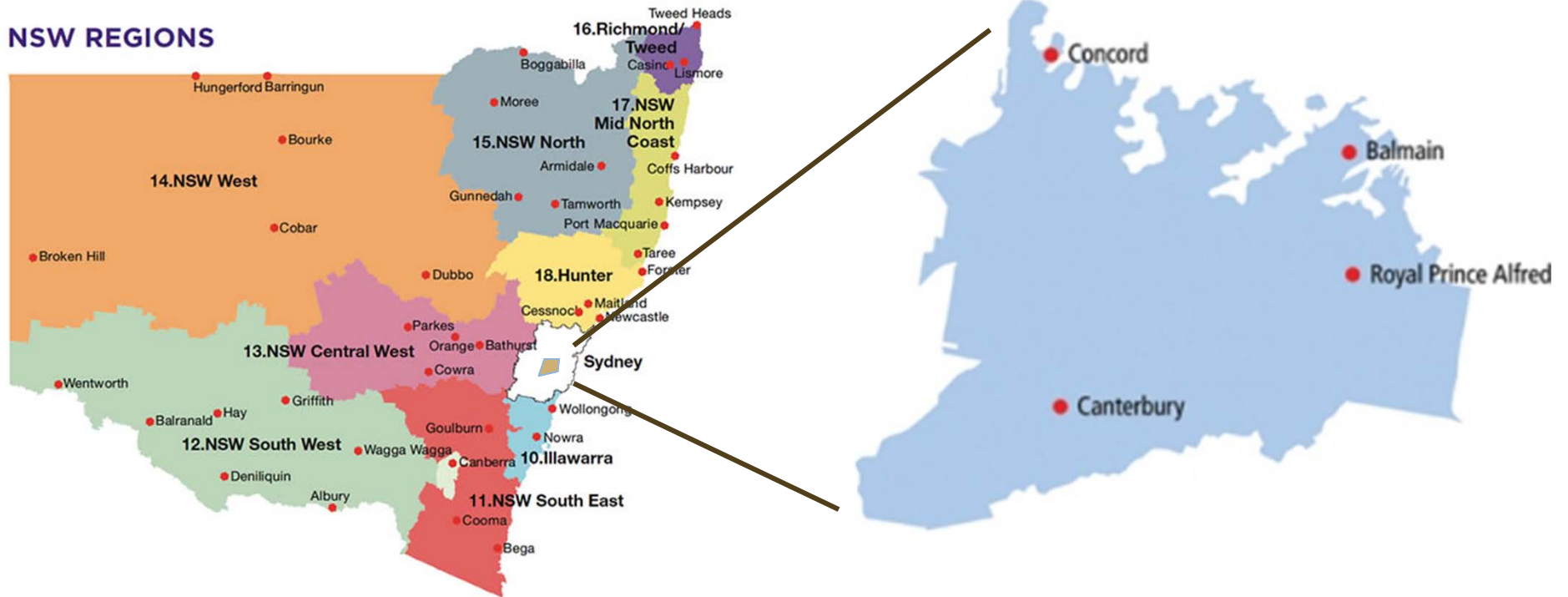


# Cannabis use across age groups

*2007 National Drug Strategy Household Survey*



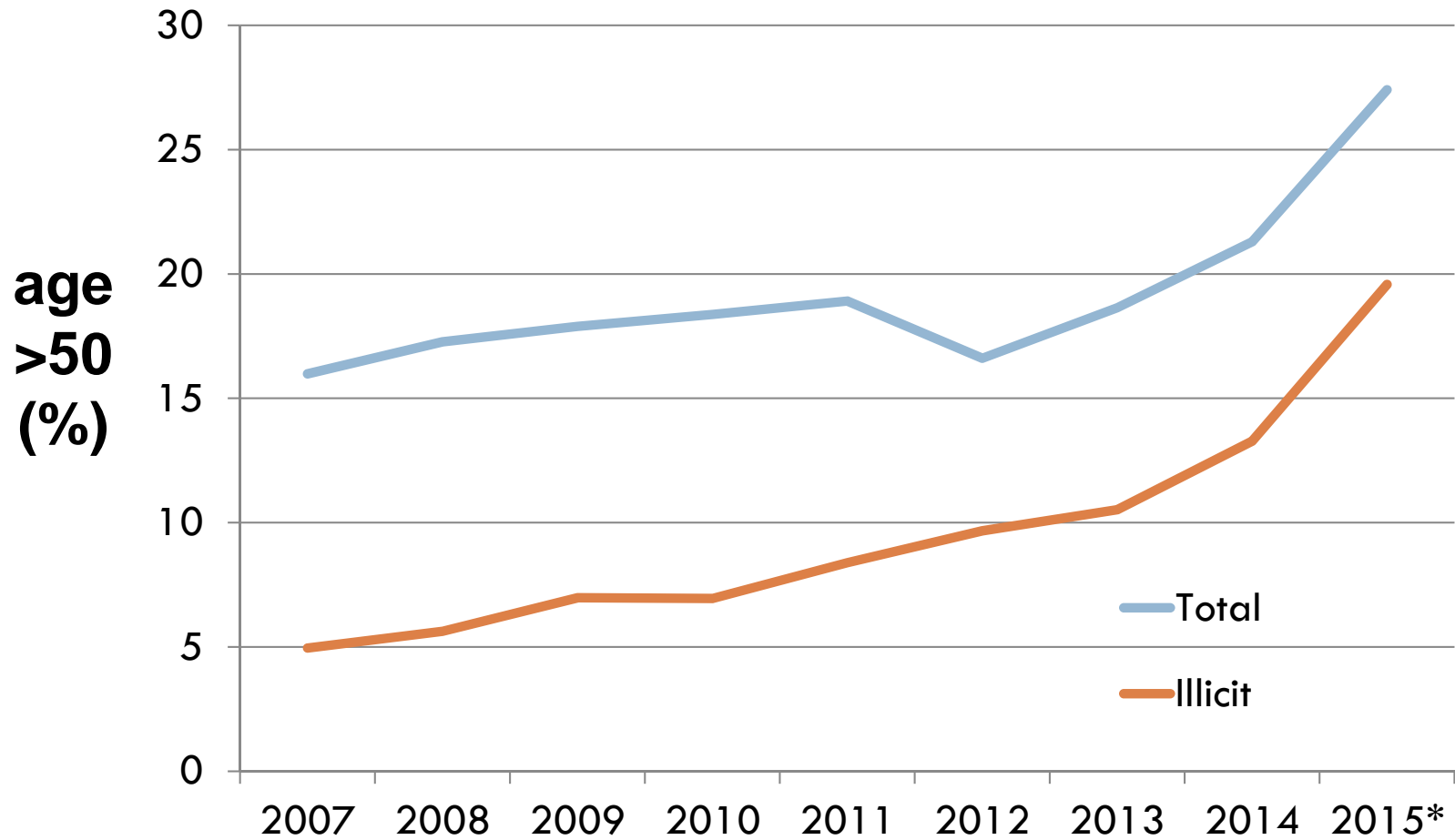
# Sydney LHD: inner west



7.4 million people

582,000 people

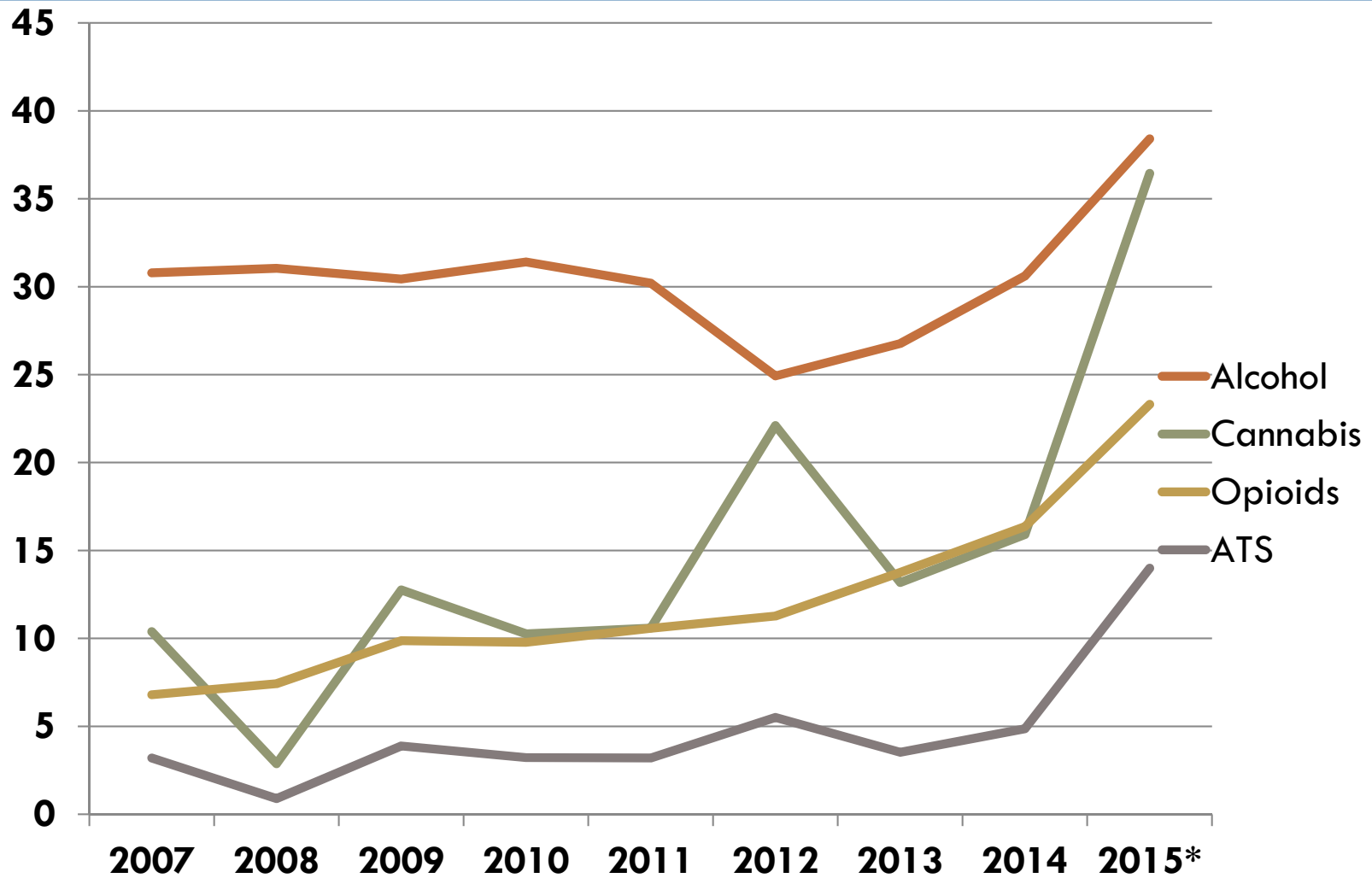
# Ageing SLHD DHS outpatients



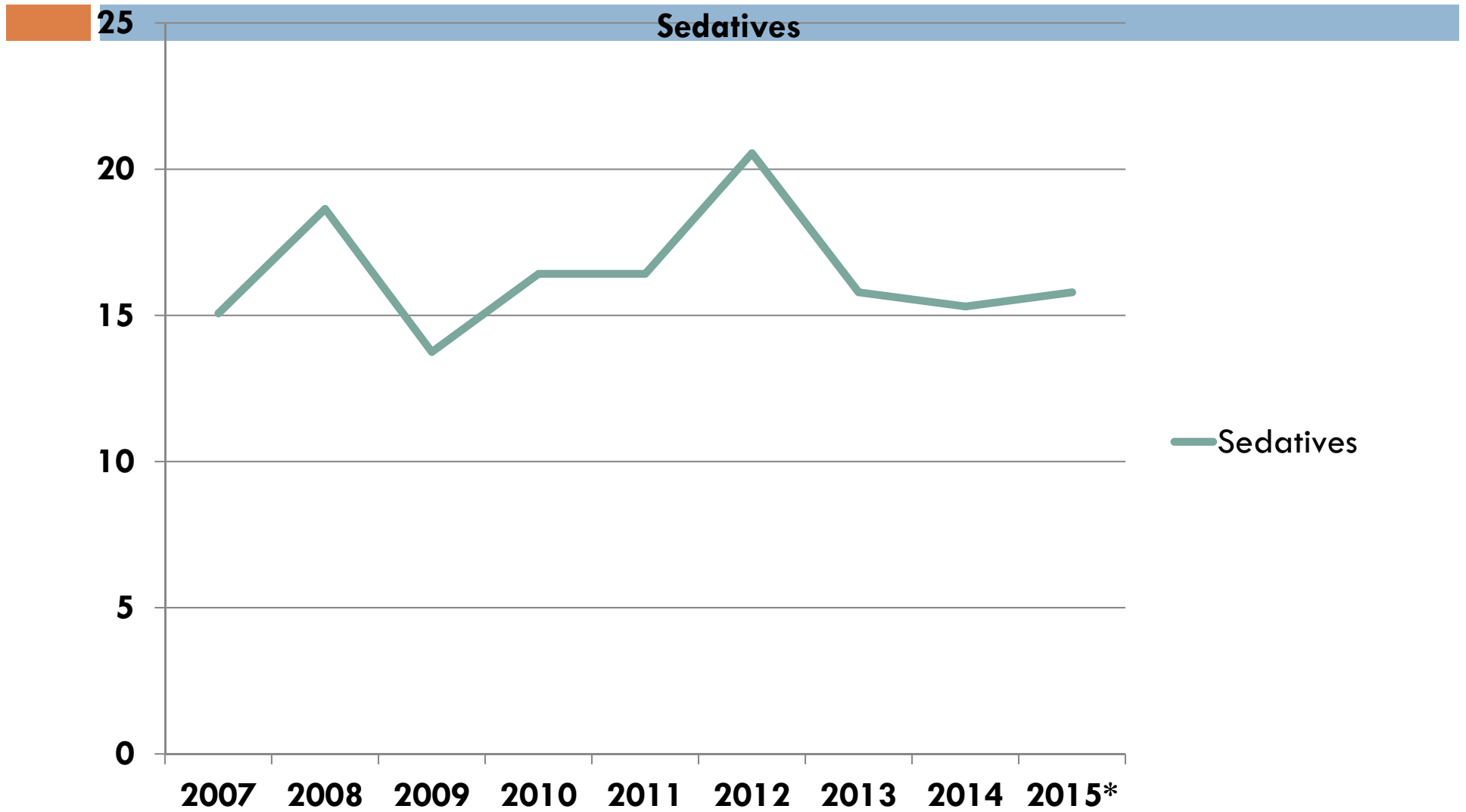
<b>TOTAL</b>	<b>2,527</b>	<b>3,230</b>	<b>3,001</b>	<b>2,841</b>	<b>2,998</b>	<b>2,396</b>	<b>2,376</b>	<b>3,005</b>	<b>974</b>
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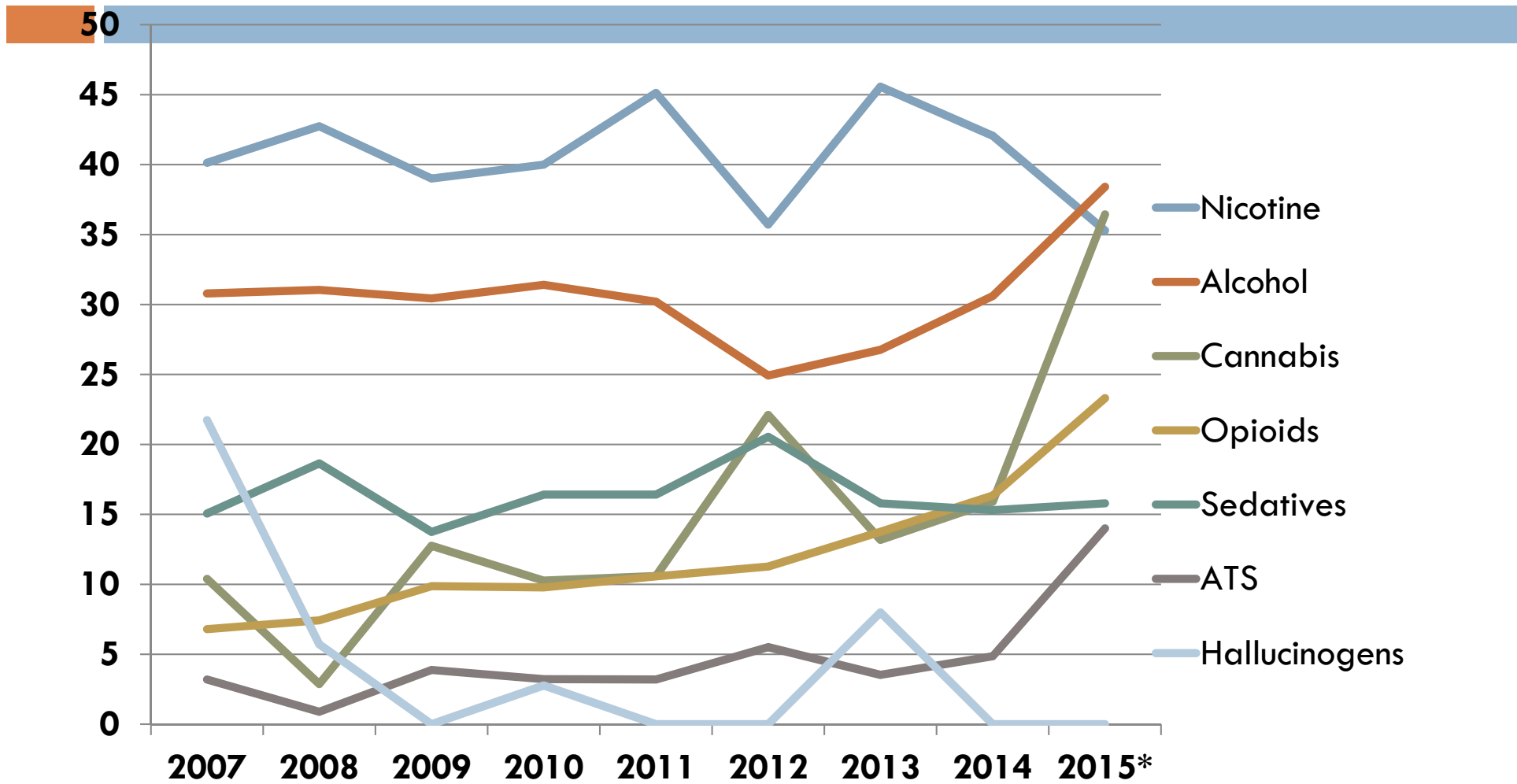
# Breakdown by 1<sup>o</sup> drug concern



# Breakdown by 1<sup>o</sup> drug concern



# Breakdown by 1<sup>o</sup> drug concern



# Comments



- Overall aging
- Great majority of clients still aged <50
- Ageing effect greatest for
  - ▣ Opioids
  - ▣ Alcohol
  - ▣ Cannabis



# Recognition / Diagnosis

Problematic at all ages

# Detection of substance use



- Older people tend to minimise their substance use history
- We do not routinely screen for substance use
- We have a lower degree of suspicion (*WHY?*)
- We tend to be more understanding of increased alcohol use in the context of changed social circumstances and worsening health status.
- We are less likely to refer older patients to specialist services

# Diagnostic problems

- Formal substance use diagnoses per DSM-IV or ICD-10 not important in practice
- Usual diagnostic tools (i.e. CAGE) may not be adequate in sensitivity to capture the severity of the problem (SMAST-G validated in old people but who uses it?)
- Criterion for not fulfilling responsibilities may not be applicable
  - ▣ They may no longer be driving or may be living alone
- Who does urine drug tests on 75 yr olds?

**Table 1 Applying DSM-IV diagnostic criteria for substance dependence to older adults**

<i>Criteria</i>	<i>Special considerations for older adults</i>
1 Tolerance	Even low intake may cause problems owing to physiological changes
2 Withdrawal	May not develop physiological dependence
3 Taking larger amounts or over a longer period than was intended	Cognitive impairment can interfere with self-monitoring
4 Unsuccessful efforts to cut down or control use	Reduced social pressures to decrease harmful use
5 Increased time spent obtaining substances or recovering from effects	Negative effects can occur with relatively low use
6 Giving up activities because of use	Decreased activities because of comorbid psychiatric and physical disorder Social isolation and disability making detection more difficult
7 Continued use despite physical or psychological consequences	May not know or understand that problems are related to use, even after medical advice Failure of clinician to attribute problems to alcohol or drug misuse

Adapted from Blow (1998).

***UK College Psychiatry Report 2011  
“Our invisible addicts”***



# RED FLAGS

- ▶ Irritability, mood changes, anxiety
- ▶ Frequent falls, bruising
- ▶ Neglect, change in presentation
- ▶ Confusion
- ▶ Tremor, seizures
- ▶ Cognitive impairment
- ▶ Malnutrition
- ▶ GI complaints
- ▶ Impaired LFTs
- ▶ Slurred speech
- ▶ Gait problems
- ▶ Improves in hospital but readmitted often!

# SCREENING

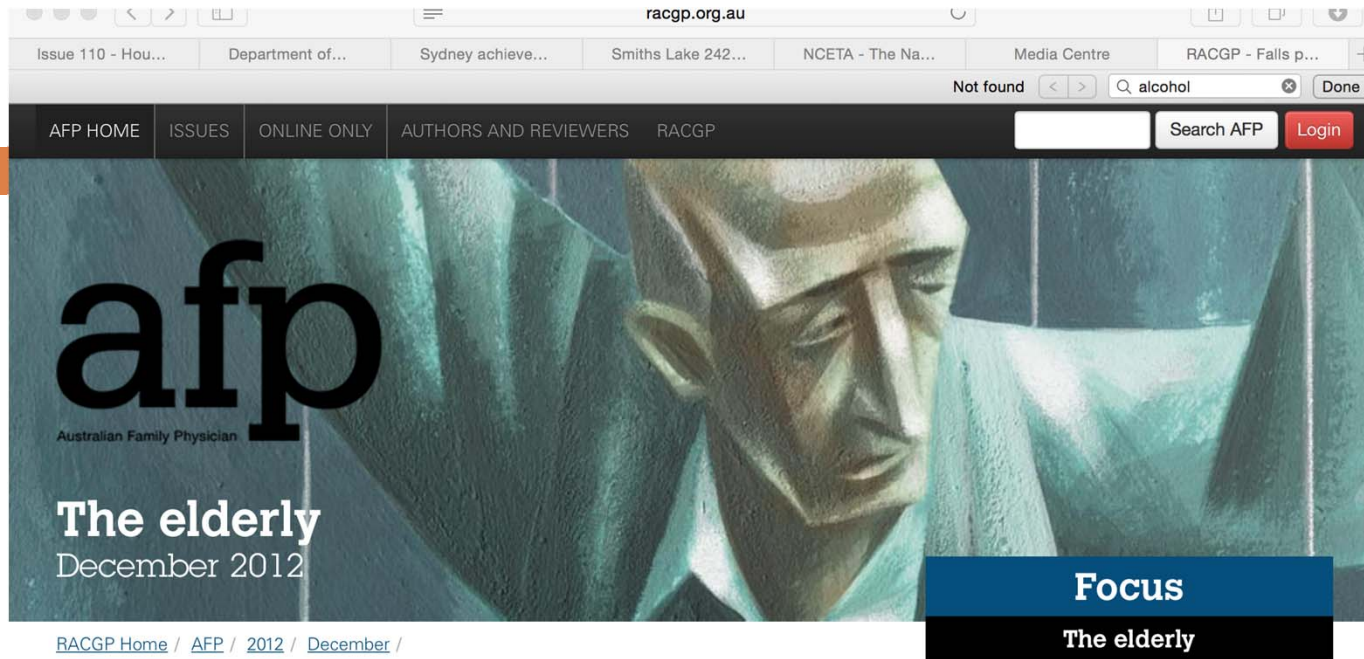
- Consider screening tools such as CAGE and AUDIT for alcohol
- OR AT LEAST ASK ABOUT D&A USE, esp prescription use
  
- UDS if in patient and history is not clear
- MMSE for cognition
  - ▣ Consider ACE-R or similar screening tools if patient is younger ie mid 50s for the assessment of cognition



## Demographic profile

- 1 Age, sex and cultural diversity
- 2 The changing demographic profile

- Alcohol mentioned as a decreasing problem with age
- Illicit drugs not mentioned



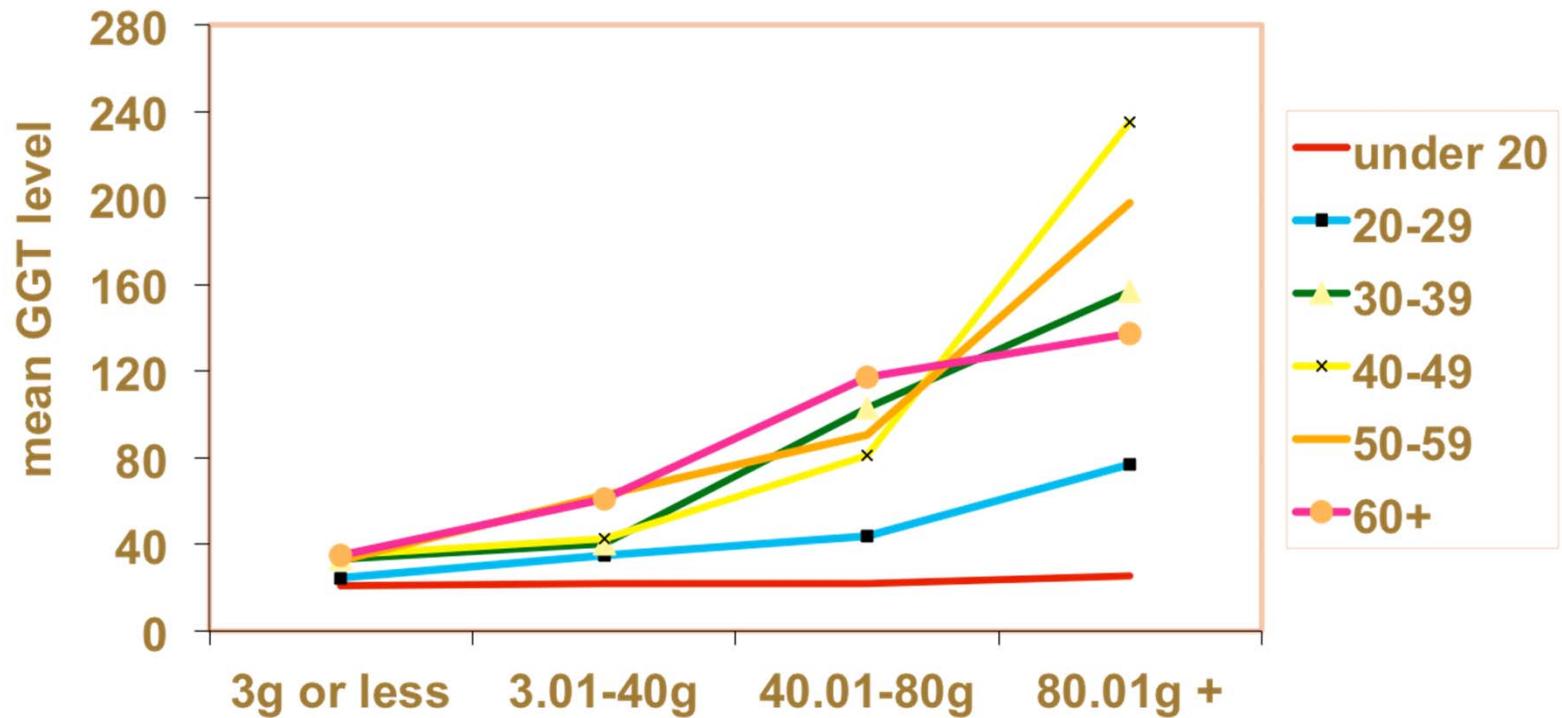
## **Falls prevention in older adults**

### **Assessment and management**

[Volume 41, No.12, December 2012](#) Pages 930-935

- ❑ BDZ reduction described well
- ❑ The word “alcohol” did not appear in this article
- ❑ Nor did “opioid” (or similar)

# Effect of age on alcohol-induced GGT elevation



Conigrave, 2002

# Alcohol dependence IS diagnosed



- GP survey with formal CIDI interviews
  - ▣ >80% diagnosed in older patients
  - ▣ Rehm et al 2015
- Fewer than 20% received evidence based treatment
- “Therapeutic gap”
  - ▣ Only 25% patients with recognised HBP treated

# COMPLICATIONS OF ALCOHOL MISUSE IN OLDER PEOPLE

- **Prominent issues in older people**
  - **Malnutrition**
  - **Falls--- fracture**
  - **Cognitive impairment/dementia**
  - **Mobility & Driving safety**
  - **Therapeutic non-adherence**
  
- **All the usual ones**
  - **Medical**
  - **Mental Health**
  - **Behavioural**
  - **More medical in older people, less behavioural**

# COMPLICATIONS OF OTHER SUBSTANCE USE IN OLDER PEOPLE

- Impaired psycho motor performance
- Ataxia
- Confusion
- Amnesia
- Falls fractures
- Worsening of existing health problems such as CAL or GORD with benzodiazepines
- Falls—fractures
- Mental health problems—increased/rebound anxiety
- Synergistic toxicity eg benzodiazepines and opiates, and respiratory depression



# Increased drug sensitivity with age

## General Physical Changes

- ▶ % of body fat up
  - fat soluble substances accumulate
- ▶ total body water decreases
  - water soluble substance concentrations such as alcohol increase

## Stomach

- ▶ Decreased gastric ADH activity
  - Increased alcohol absorption

## Hepatic

- ▶ Decreased size and blood flow
  - Impair opiate first pass metabolism!
- ▶ Decreased oxidation and hydrolysis
  - Benzodiazepines may accumulate

## Renal

- ▶ Decreased function
  - Renally excreted drugs accumulate

## Brain Function

- ▶ decreased cortical neurons
- ▶ decreased brain weight
- ▶ decreased blood flow to brain (15-20%)
- ▶ increased sensitivity to anticholinergic drugs & opiates

## Musculoskeletal

- Increased falls risk

## Sensory Changes

- ▶ Impaired hearing and vision—risk confusion
- ▶ Decreased perception of thirst—potential for dehydration and electrolyte imbalance

# MANAGEMENT

## Assess for acute withdrawal risk

- ▣ If there is a risk, consider detoxification in a setting where staff experienced in looking after older patients
- ▣ May need to consider use of oxazepam rather than diazepam
- ▣ Brief interventions
  - ▣ FLAGS
- ▣ Evidence suggest that elder people engage better if they are managed in a same age setting or a general hospital out patient department
- ▣ Engage/refer to old age services
- ▣ Family support
- ▣ Harm minimisation approach to those who do not wish to change their substance use pattern

# RISK FACTORS FOR ALCOHOL AND OTHER SUBSTANCES

- ▶ Recent bereavement
- ▶ Recent changes in economic or social conditions
- ▶ Recent diagnosis of a serious health condition or worsening health
- ▶ Socially Isolated
- ▶ Single
- ▶ Separated or Divorced
- ▶ Substance abuse earlier in life
- ▶ Co-morbid psychiatric disorders (especially mood disorders)
- ▶ Family history of alcoholism
- ▶ Concomitant substance abuse of nicotine and psychoactive prescription medicines

# Issues with ageing OTP population

- Fewer behavioural and psychiatric issues
- More medical issues related to IDU, other substance use and lifestyle
  - ▣ Obesity, smoking, BBV related mortality
- How is our methadone treatment designed?
  - ▣ Focus on behavioural management

**We need to rethink this via “clinical redesign”**

**-Evaluate clinical needs**

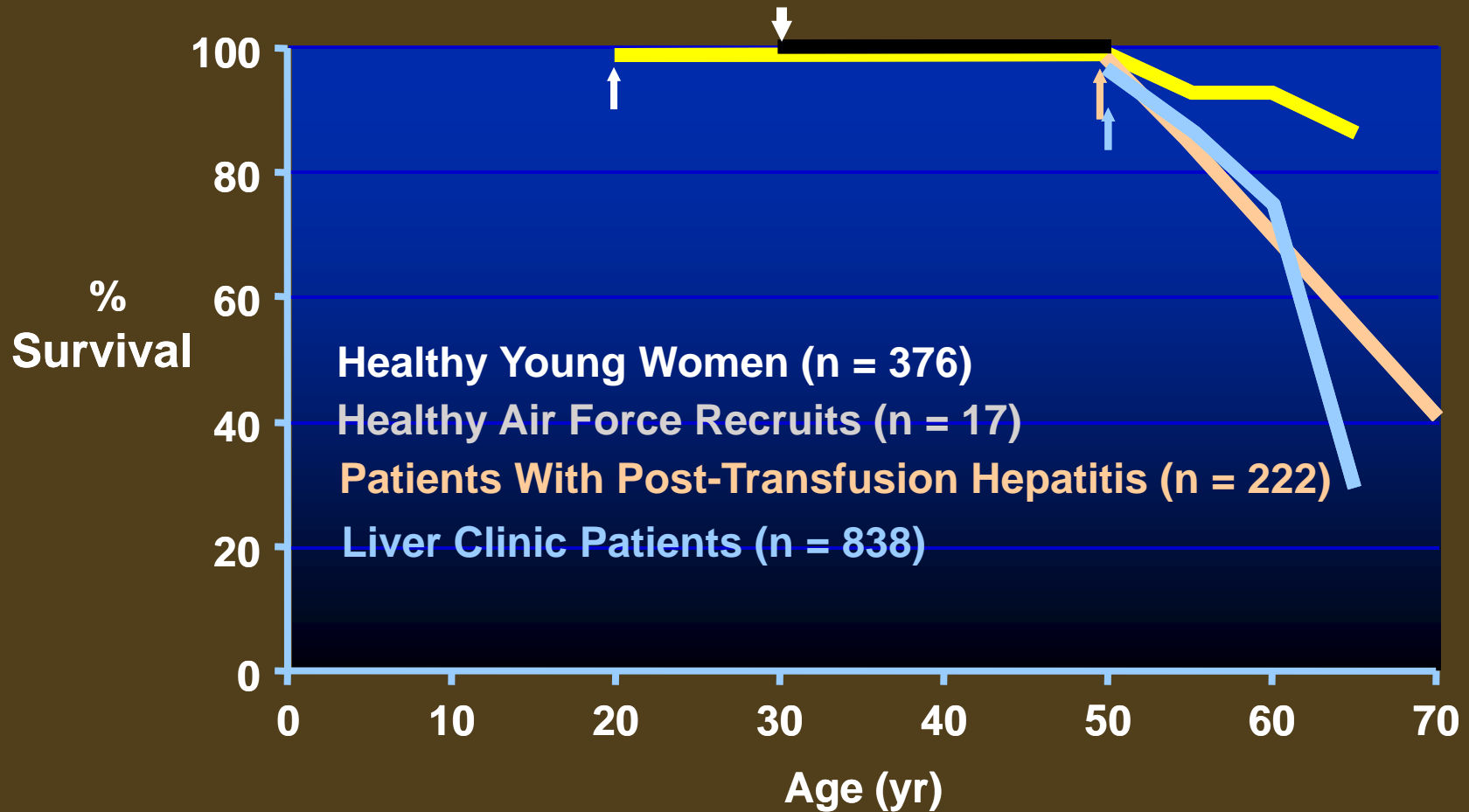
**-Develop a strategy to meet these**

- Methadone GPs care often highly focussed

# HCV - Natural History

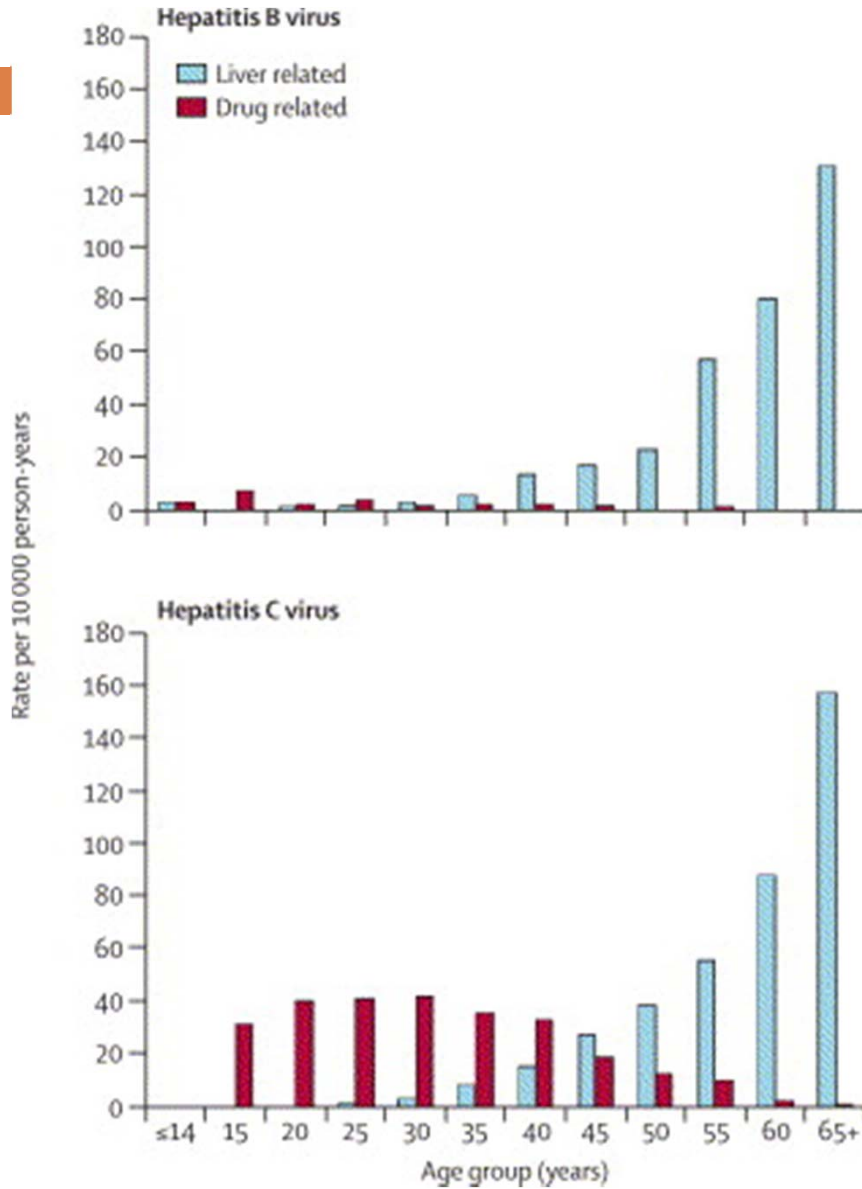
## Survival In Four Cohorts of Patients

Arrows denote median age at onset of infection



Seeff LB, 2001; Niederau C, 1998; Kenny-Walsh E, 1999; Seeff LB, 2000

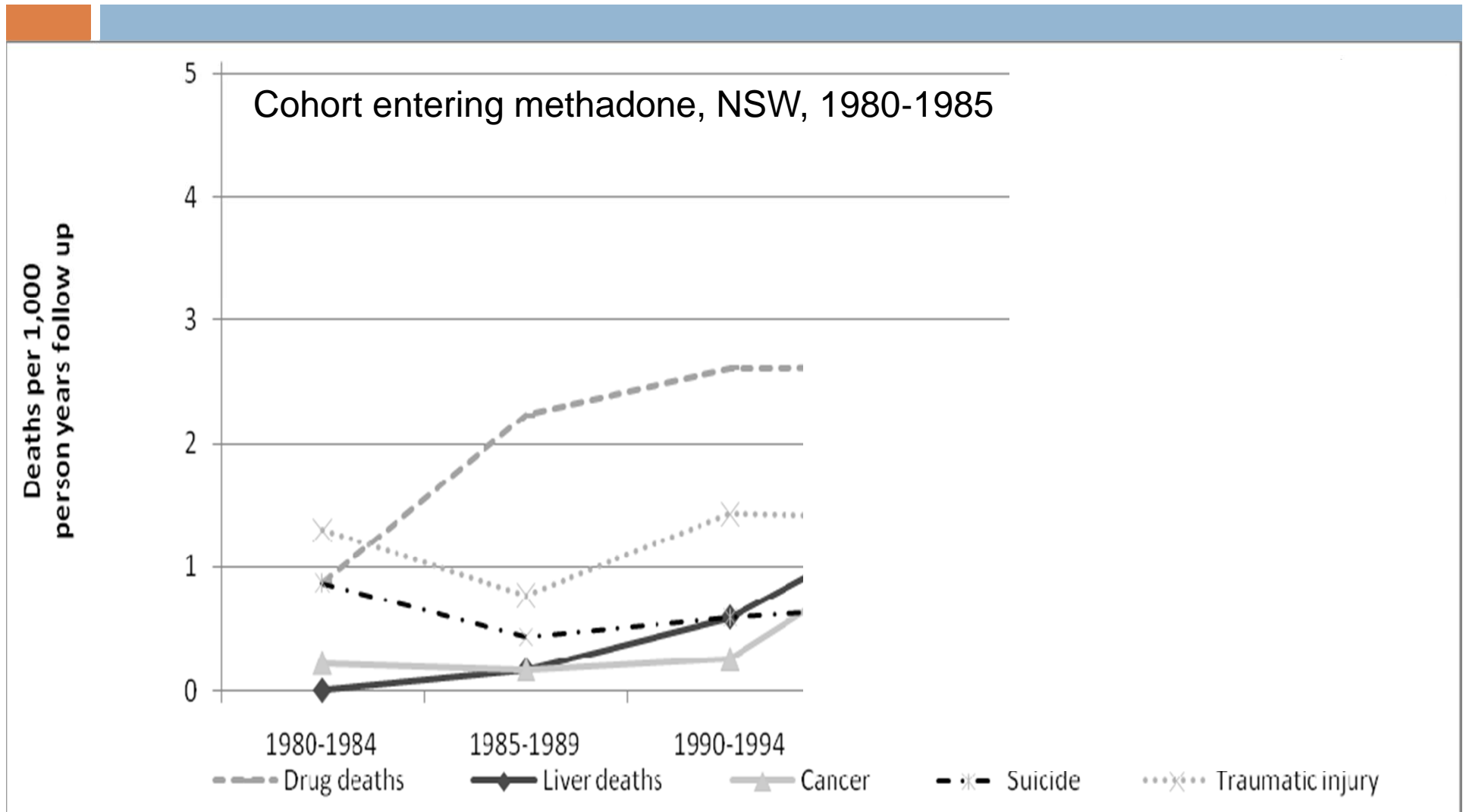
# Mortality from HBV and HCV



Linkage study from NSW,  
Australia, 1990-2002

*Amin et al, Lancet 2006*

# Liver disease is becoming the leading cause of death on OTP



*Gibson et al, Addiction 2011*

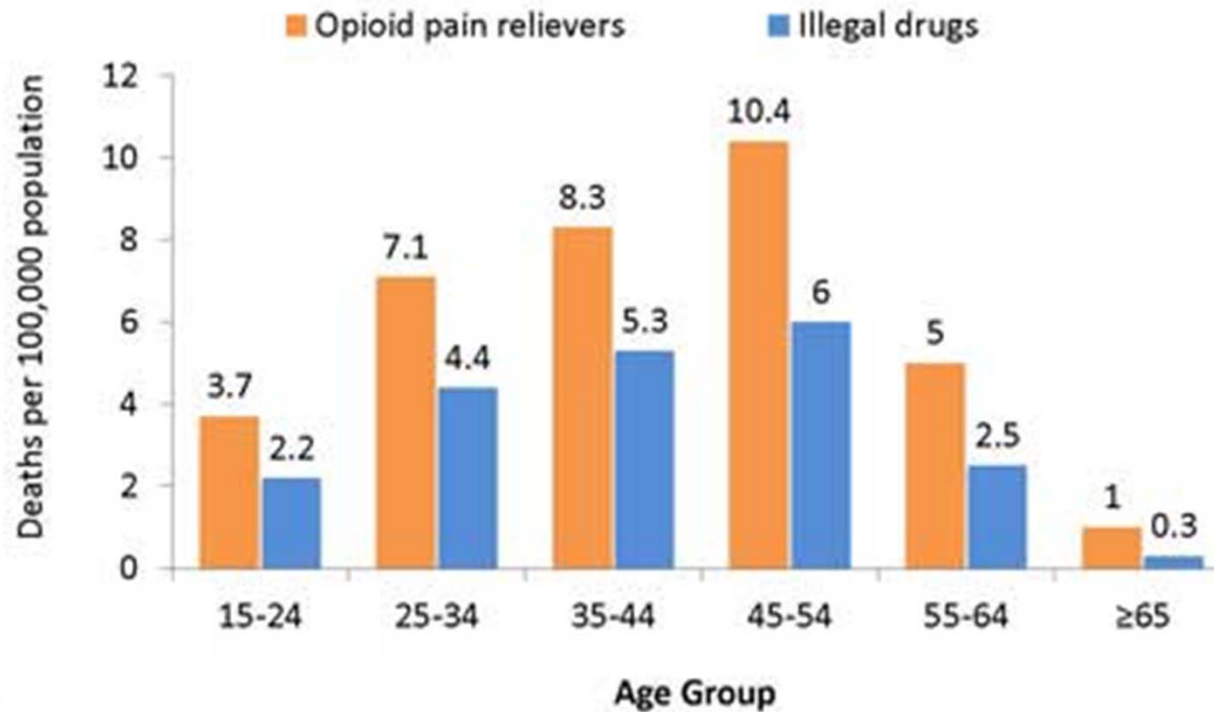
# Polypharmacy



- *“chronic use of multiple medicines over a long period of time”*
- *Mostly  $n=5$*
- *Most studies do not include recreational drugs or alcohol*

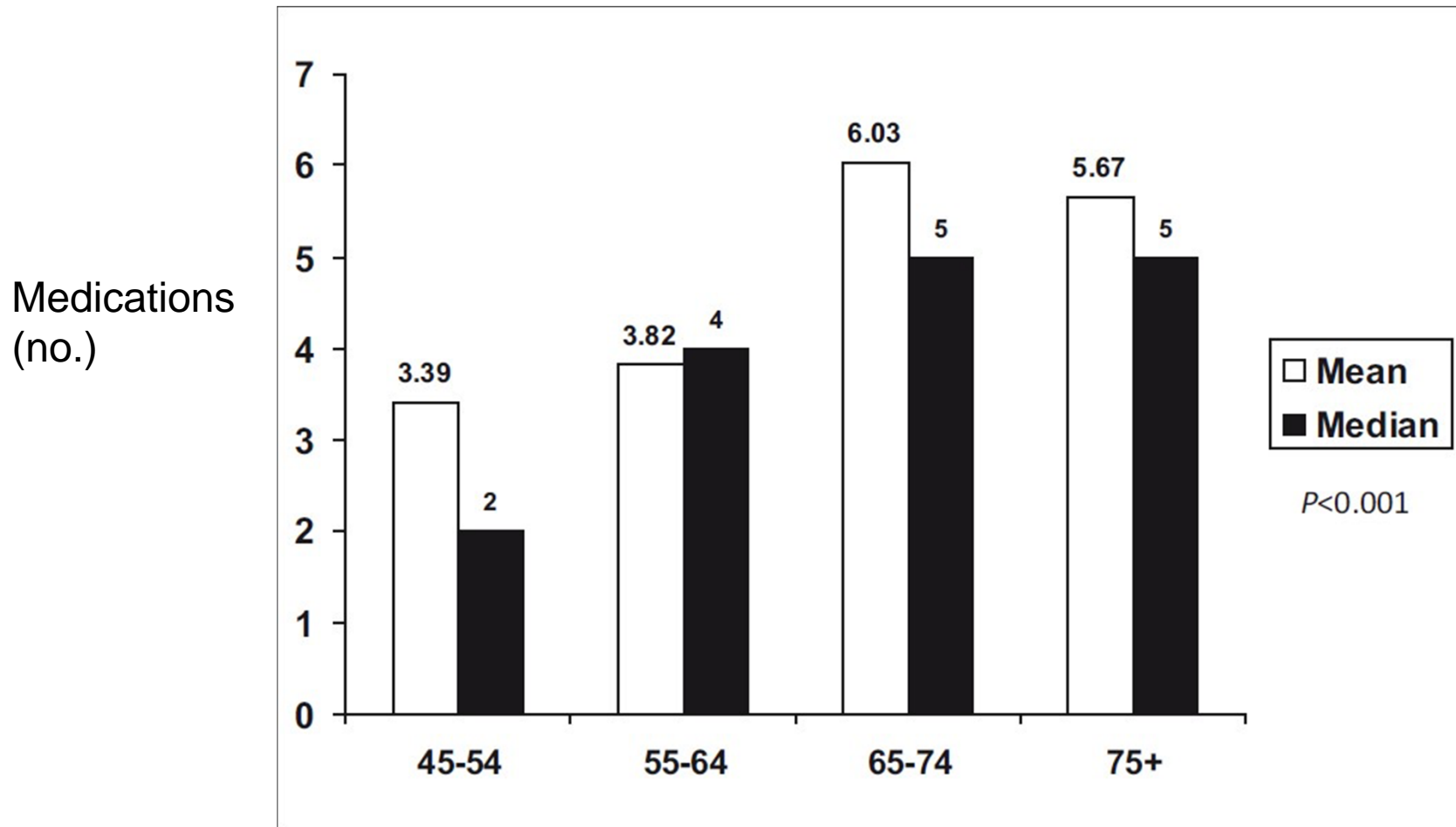


## Deaths from Opioid Pain Relievers Exceed Those from All Illegal Drugs



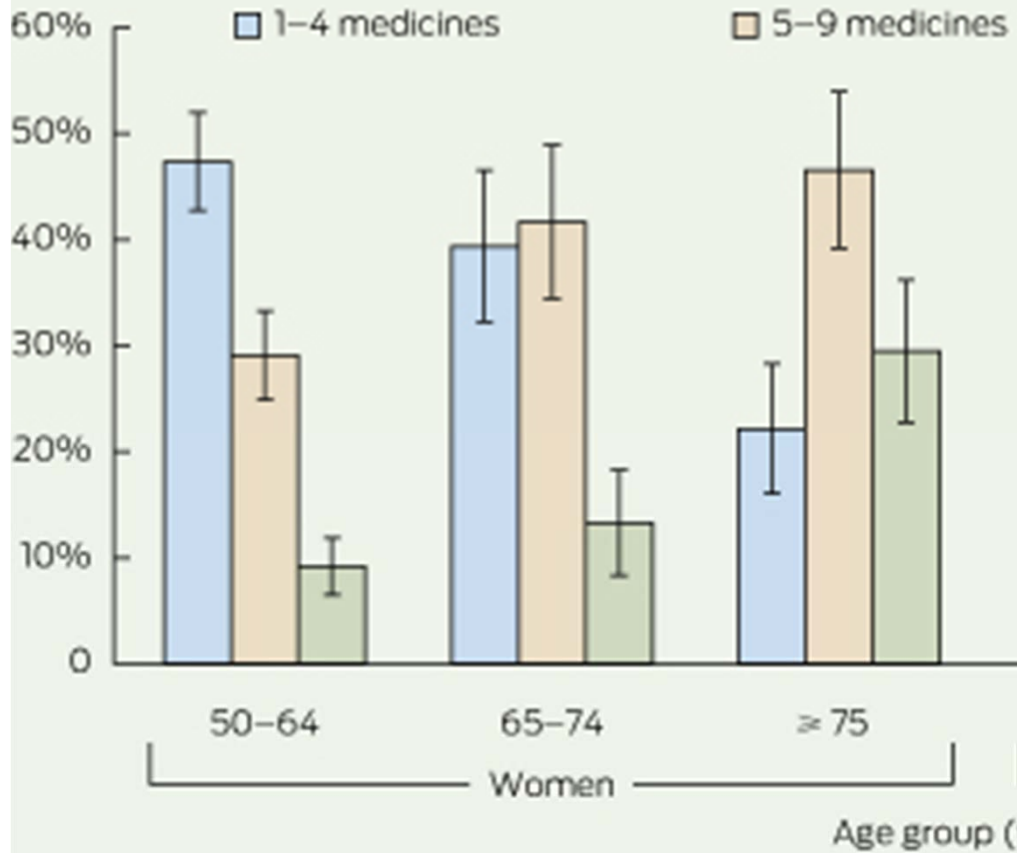
Source: CDC, Morbidity and Mortality Weekly Report, 60(43): 1489, 2011.

# Falls and medications



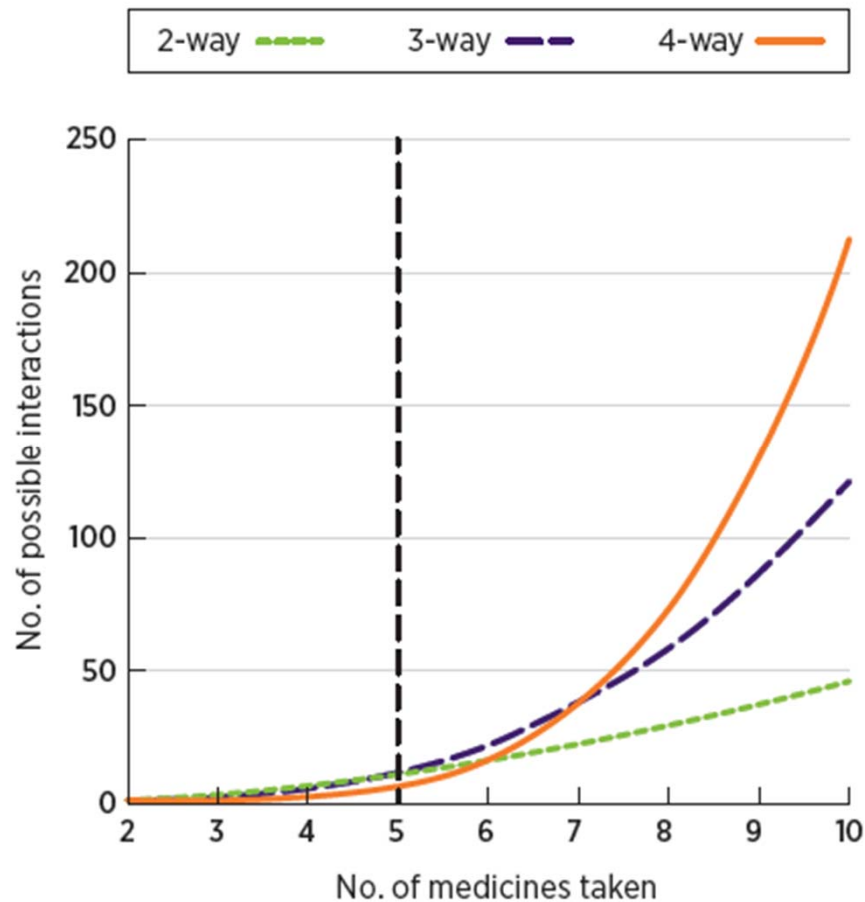
Baranzini F, et al. Fall-related injuries in a nursing home setting: Is polypharmacy a risk factor? BMC Health Serv Res 2009;9:228

# Increasing medication use



Morgan et al, Med J Aust 2012; 196 (1): 50-53

# Risk of drug interaction increases exponentially with number drugs taken



# Alcohol – Drug interactions

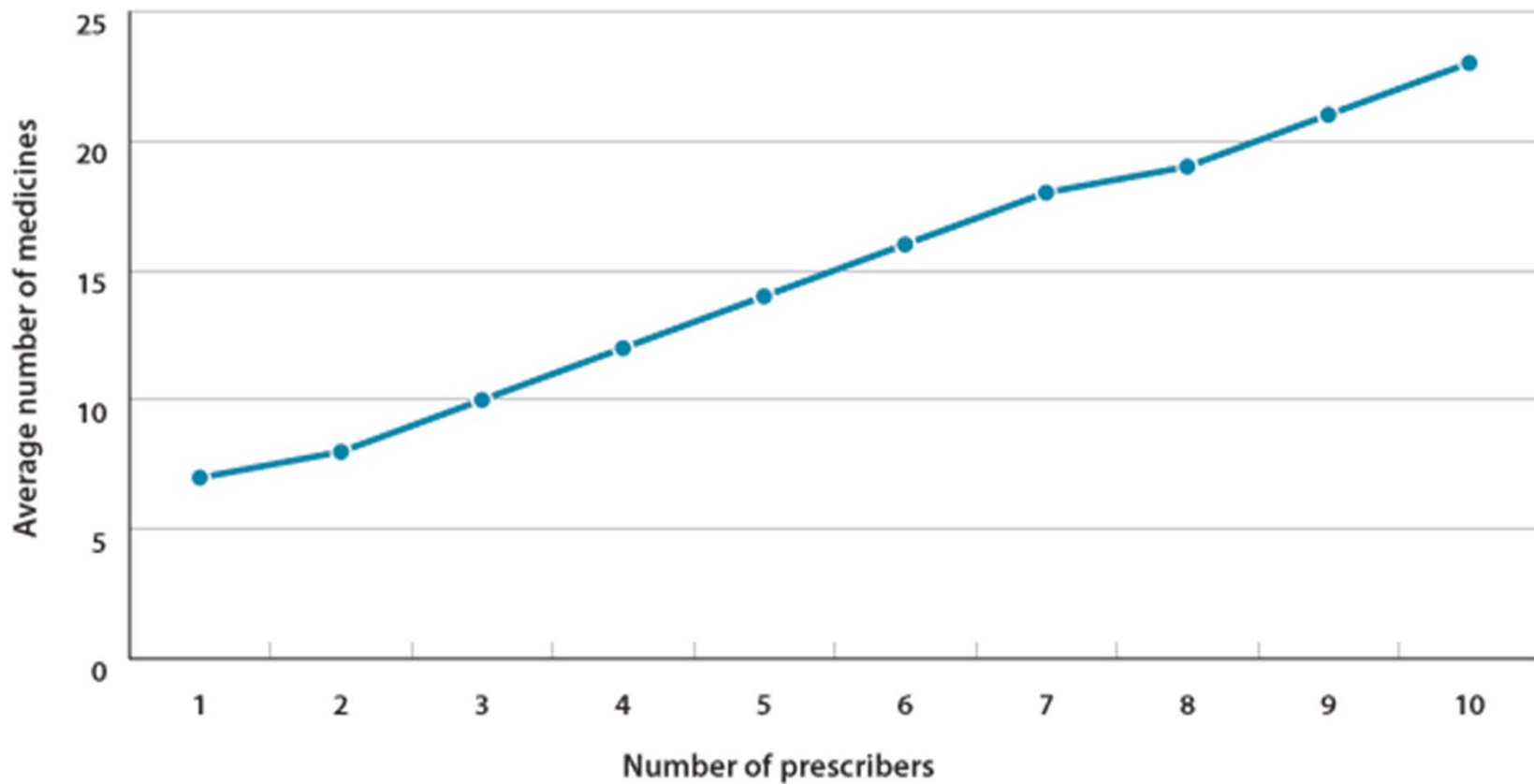
## □ Pharmacokinetic

- Alcohol alters blood level of drug (or vica versa)
- Example: Alcohol & warfarin
  - Alcohol increases warfarin clearance (results in clotting)
  - Alcohol cessation opposite effect (results in bleeding)
  - If alcohol use unpredictable, avoid warfarin

## □ Pharmacodynamic

- Alcohol alters action of another drug (or vica versa)
- Example:
  - Alcohol & sedatives
  - Alcohol, Methotrexate & hepatotoxicity

# Multiple prescribers → multiple drugs



<http://www.bpac.org.nz/BPJ/2012/october/elderlyMedicines.aspx>

# Prescription drug users

- Opioids and Benzos particularly
- Occasionally SSRI, still see some barbiturates
  
- Overview of management:
  - ▣ Review ongoing need for medication
    - Non drug treatment, non-opioid and non-BDZ treatment
  - ▣ Set limits with compassion, reason, but set limits
    - Be prepared to say “NO” to inappropriate requests
    - Look out for doctor shopping, specialist splitting
  - ▣ If “Yes”, single prescriber, reduce to safe levels, safe supply

# Solutions?



- Improving diagnostic assessment
- Reducing the number of prescribers seen
  - ▣ Integration of care
  - ▣ Particular challenge in Australia (c/w UK)
- Consider substance use alongside other health care issues
  - ▣ Weight, activity, BP, cholesterol, HCV, cancer screening, mental health care, risk assessment/mgt
  - ▣ Design system to achieve this: workforce, roles, partnerships



# Partnering with aged care?



- Clinical stream process in my institution
- Meeting between drug health and aged care
- “We don’t really have any D&A problems”
- “And when we do, they don’t want to do anything about it anyway”
- “Don’t see how your service can really help”
- “OK, we’ll keep a log of any issues”
  
- No calls or consultations in subsequent year

# We need change at all levels

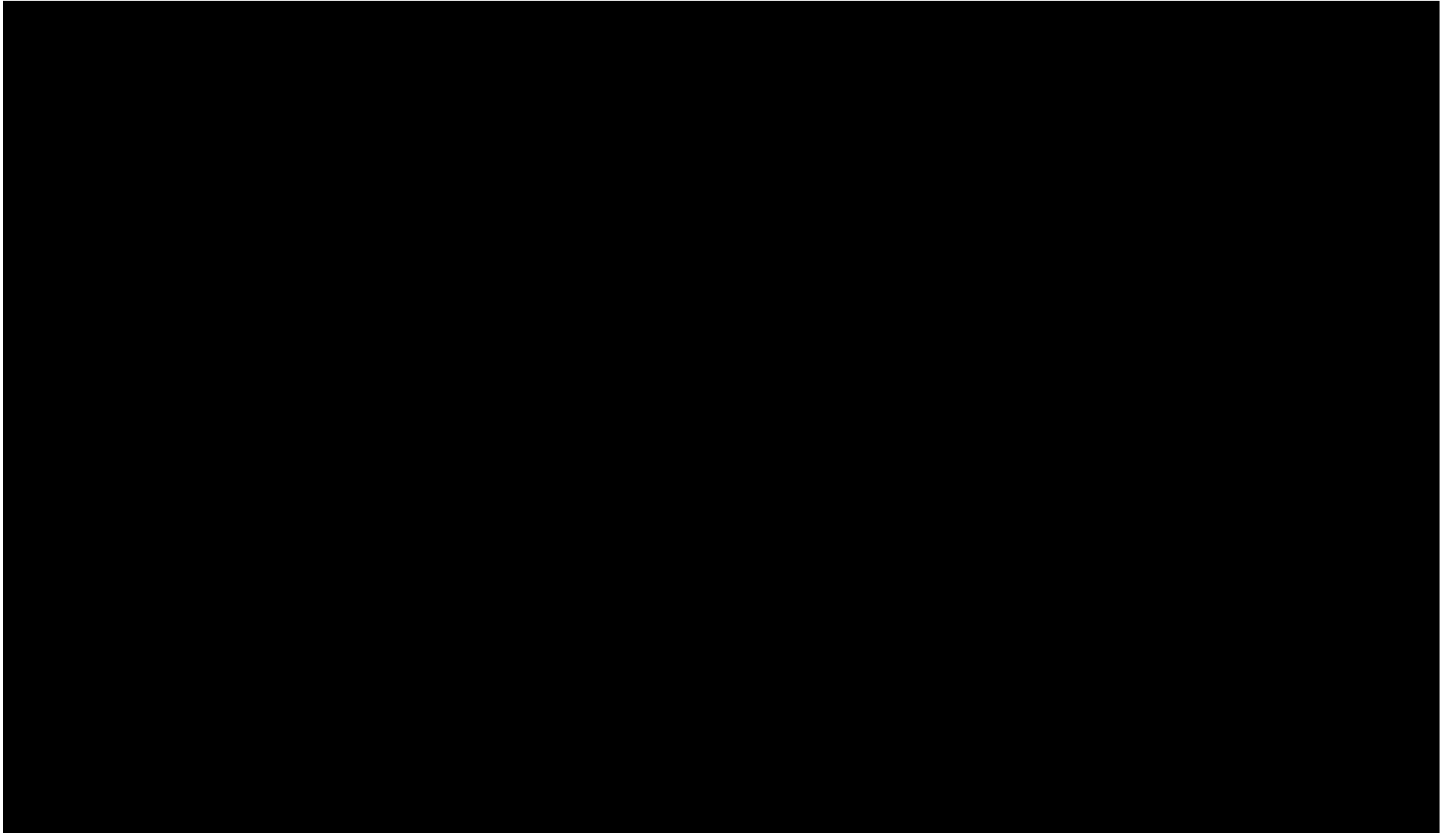


*“Problems of substance use in older people are growing rapidly in frequency and severity and we are not doing very much about it”*

- Policy
- Screening
- Clinical intervention
- Education
- Research
- Public Health

# What can be recommended?

- Continued focus on a growing problem:
  - ▣ Prevention, Diagnosis, Treatment, Harm Reduction
- Integration of care sounds like a good idea but I don't know how feasible it is. Will services that have failed to engage with these problems do so now?
- An approach
  - ▣ Active partnerships between Addiction Medicine services and Aged Care/Primary care/Carers
    - ▣ Consultation-liaison
    - ▣ Expert KOLs
    - ▣ Research and training projects
    - ▣ Clinical system redesign at all levels



# Clinical Redesign Process



- Define problem
- Establish team, timelines
- Diagnostic phase
  - ▣ Consult stakeholders/staff re issues (not solutions)
  - ▣ Consult/survey clients/carers
  - ▣ Collect relevant measures
- Solution phase
  - ▣ Second round consultation re solutions
  - ▣ Develop implementation strategy
  - ▣ Implement
  - ▣ Measures outcomes