



## Inhalant use in Australia: an overview

Inhalant use and Disorder, 7-8<sup>th</sup> July,  
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# Outline

- Background material on inhalants
- Extent of the problem
- Consequences of inhalant use
- Weaknesses in the evidence base
- Improving the evidence base



# What are inhalants

- Volatile solvents – liquids or semi-solids
- Aerosols – sprays containing propellants and solvents
- Gases – medical anaesthetics and refrigerants
- Nitrites – relaxes muscles and is used as sexual enhancers



# Sources

- Common household and industrial products
  - Liquid cements and plastic glues
  - Inflammable substances (petrol/lighter fluid)
  - Dry cleaning fluids and spot removers
  - Paint and lacquer thinners and removers
  - Spray deodorants, hairsprays, vegetable oil, non-stick
  - Furniture polish
  - Bottled domestic gas and cylinder propane gas
  - Degreasers
  - Whipped cream bulbs
- Survey of a supermarket, stationery store and hardware found 284 potential sources (over half were sprays)



# Terminology

- Label
  - Inhalants
  - Solvents
  - Volatile substances
- Act of inhaling
  - Chroming (aerosol paints)
  - Nanging (nitrous oxide from whipping cream bulbs)
  - Huffing (use of a bag)
- Definition
  - Intentional inhalation of substances that give off a vapour or gas at room temperature for their intoxicating effects
  - 'abuse' is used to differentiate between accidental and intentional inhalation



# Background

- Respiratory tract and the lungs have been used to absorb drugs and other substances since the discovery of fire
- Aromatic and intoxication
  - Hedonistic
  - Therapeutic
  - Rituals/rites of passage in both religious and secular ceremonial activities



# Pharmacology

- Tolerance can develop
  - Large daily amounts will induce tolerance in a week
  - 3 months of once weekly usage of model airplane cement has been observed to produce tolerance
- Psychological dependence
  - Certainly occurs for daily users
  - Intoxication, not to a specific chemical
- Physical dependence
  - Less evidence – trembling, irritability, appetite loss, insomnia after abrupt discontinuance
- Consequences can range from mild confusion, impaired judgement, psychomotor clumsiness, stupor, coma and death



# Any different from other illegal drugs?

- Produced legally for industrial purposes not specifically for human consumption
- Virtually no medical usefulness
- Intoxicating substance may be only one component of the product
- Chronic users are younger, potential for significant long term harm to the brain/other organs is higher
- Very high availability and accessibility
- Lethality ratio (low incidence but high death rate) is higher than for drugs like cannabis



# Delivery methods

- breathed in through the nose
  - Poured or sprayed onto a cloth/tissue
  - Plastic/paper bag
  - Balloons
- Sprayed into the mouth
- Inhaling fumes



# Explanations for use

- Alleviate boredom: Fun/Excitement
- Intoxication
- Peer groups
- Risk taking
- Rebellion
- Access
- Cheap
- Not illegal



# Reasons for trying drugs

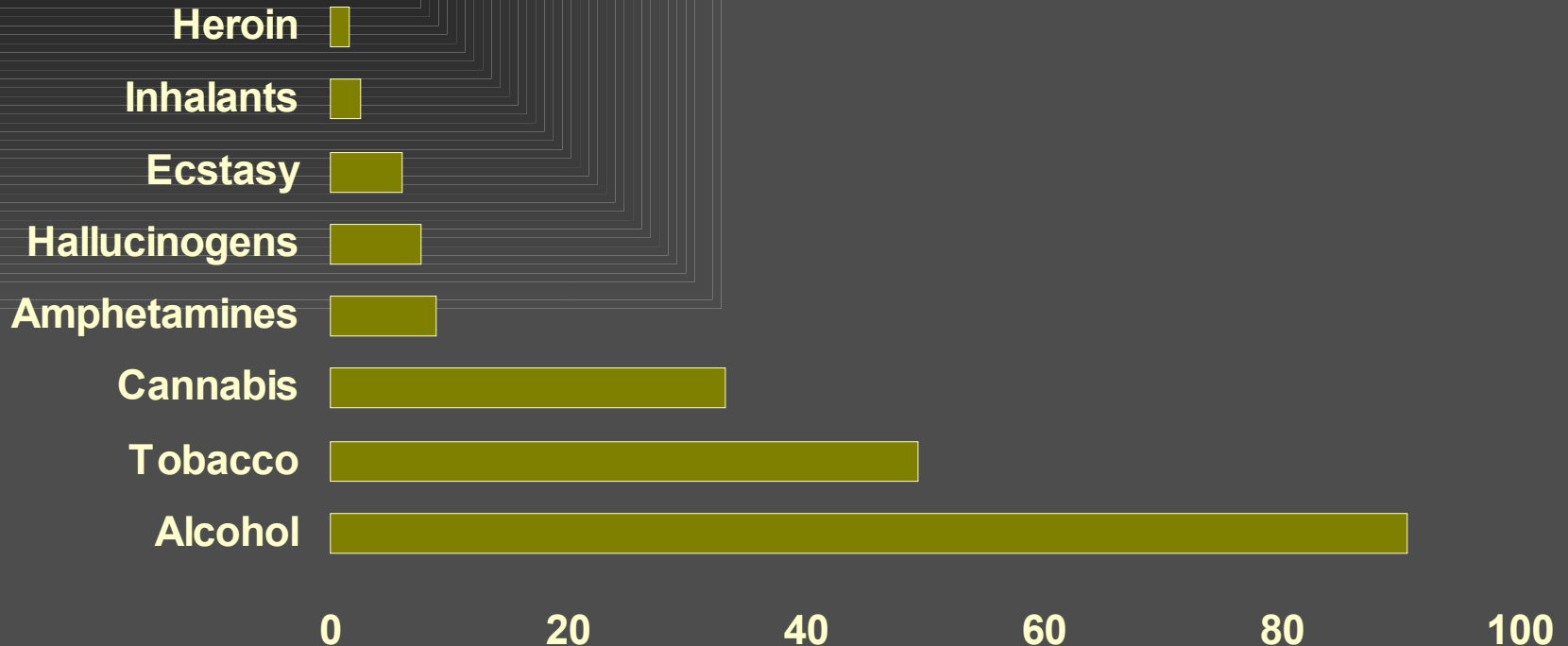
	Any illicit	Inhalant
Friends	41	41
Curiosity	65	82
To feel better	7	20
Risk	8	26
Something exciting	18	45
Family problems	4	12
Work/school/problems	4	15
Traumatic experience	3	15
Lose Weight	2	5

Source: AIHW, 2001 National Drug Strategy Household Survey



# Extent of the problem, household survey

Ever used, aged 14 years and over



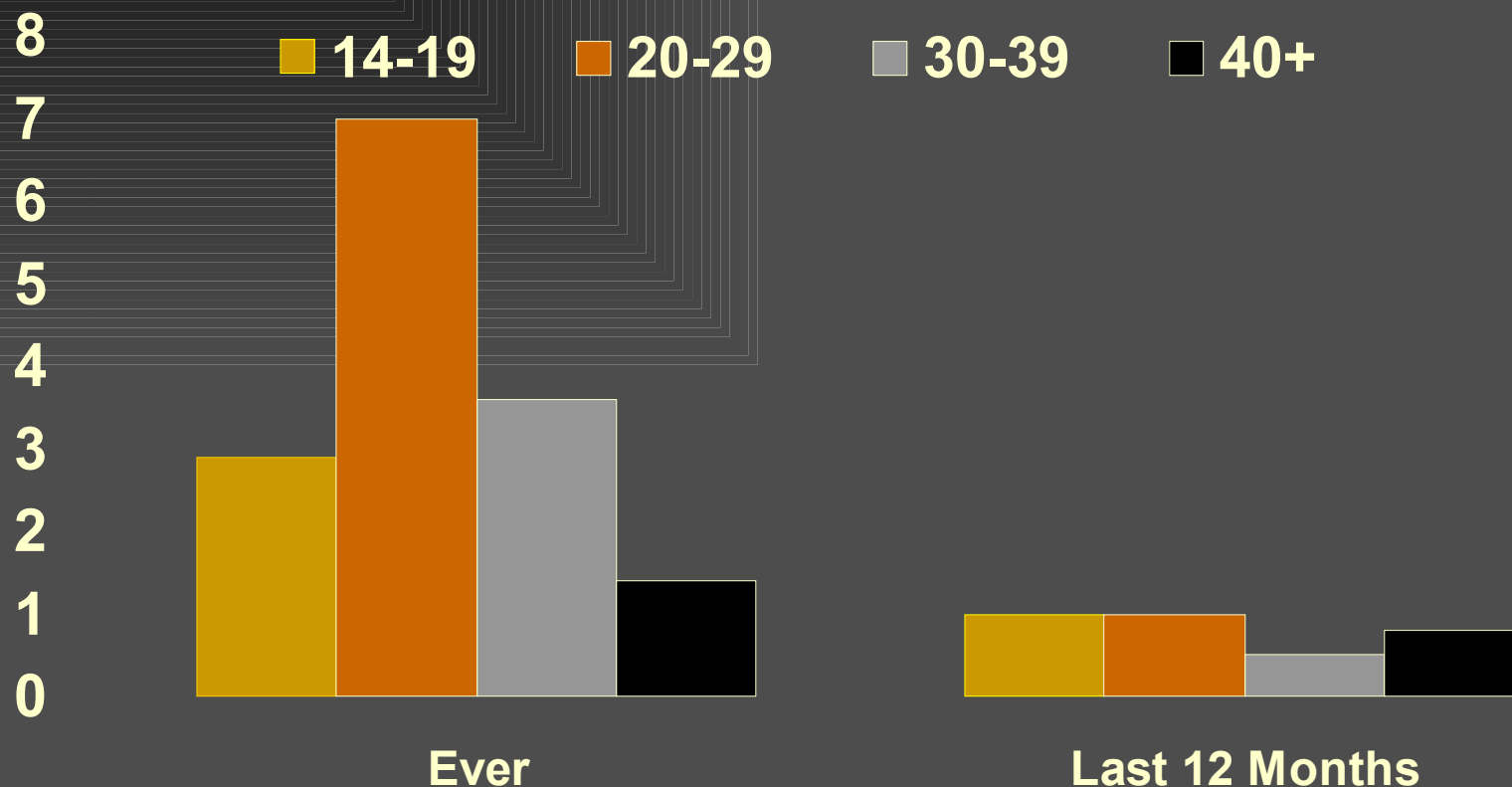
Source: AIHW, 2001 National Drug Strategy Household Survey

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# Extent of the problem, household survey

Percent used, 2001, by age groups



Source: AIHW, 2001 National Drug Strategy Household Survey

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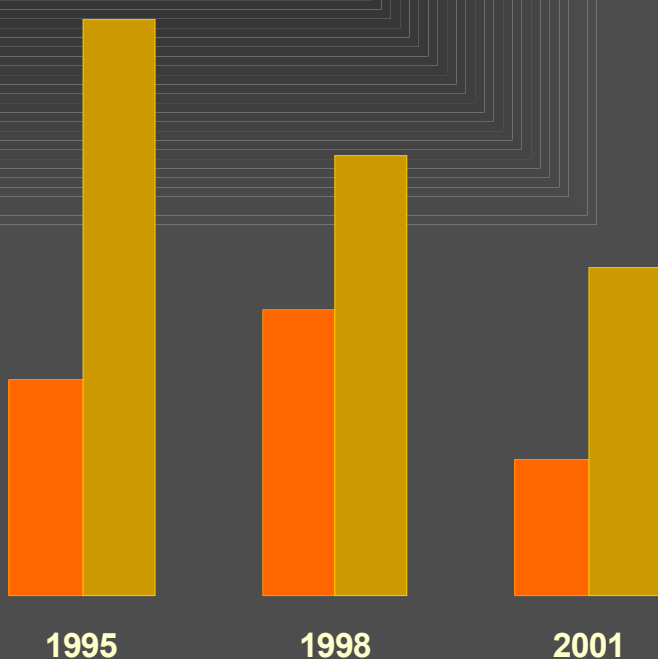


# Extent of the problem, household survey

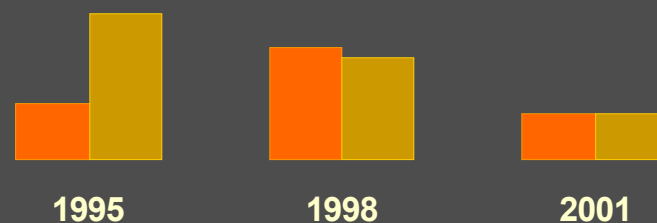
Percent used, 1995-2001, aged 14 years + ■ 14-19 ■ 20-29

14  
12  
10  
8  
6  
4  
2  
0

**Ever**



**Last 12 months**



Source: AIHW, 2001 National Drug Strategy Household Survey

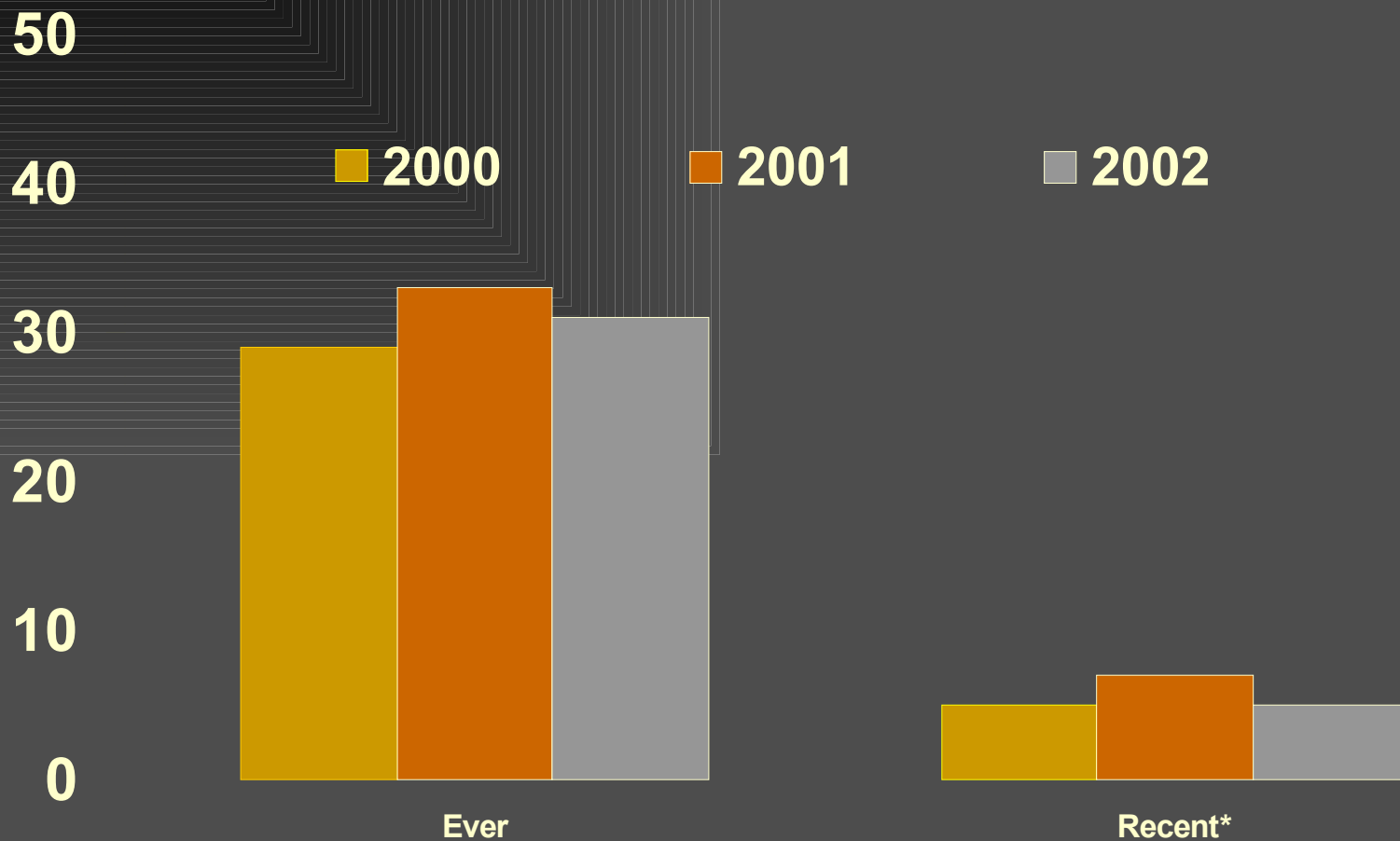


# Extent of the problem --Secondary Students Survey, 1999

- Covers 12-17 years
- 26 percent reported deliberately sniffing inhalants at least once
- 19 percent had used in the past year
- 11 percent in the past month
- 7 percent in the last week
- 12-13 year olds were 5 times more likely than 17 year olds to report use in the past week



# Extent of the problem – injecting drug users



\* Used in the past 6 months

Source: NDARC, IDRS

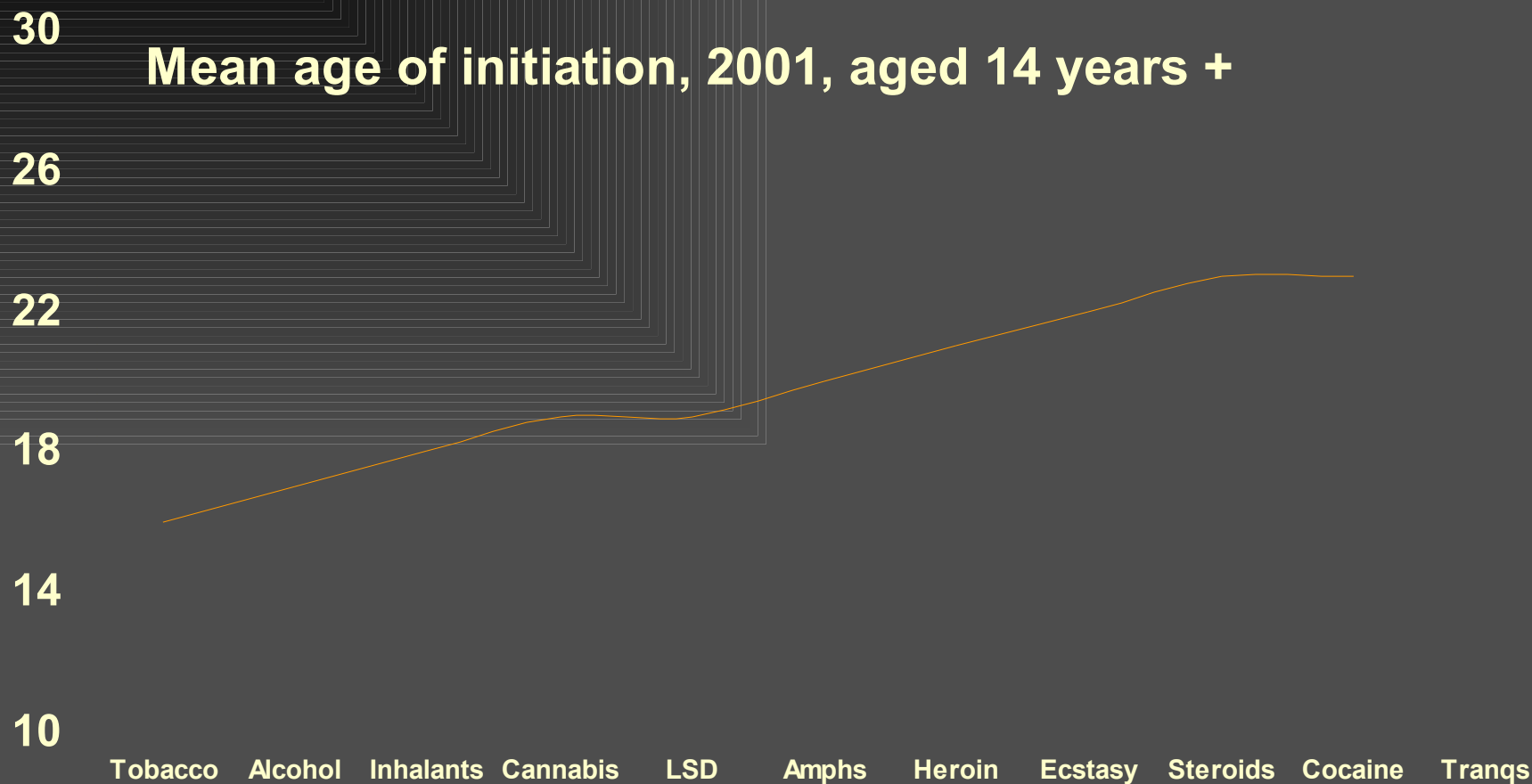


# Extent of the problem – CJS

- Young offenders survey NSW, 1990, 49 percent had used inhalants
- Victorian Children's Courts Search Warrants – 30 percent cited inhalant use as a problem
- 1986-89 NT 10% of crime by juveniles was accounted for by petrol and glue sniffing offences
- 2001 adult male detainees 20% had tried, 4% regularly used, 21% of those who had ever tried went on to regular use
  - Mean age of initiation for regular users 12.5 years



# When do they start?



Source: AIHW, 2001 National Drug Strategy Household Survey [Computer File]



# Are friends important?

	Never used	Ever used	Recent use
Number of friends use inhalants:			
Most	0	1	5
About half or less	2	34	69
None	98	65	26

Source: AIHW, 2001 National Drug Strategy Household Survey [Computer File]

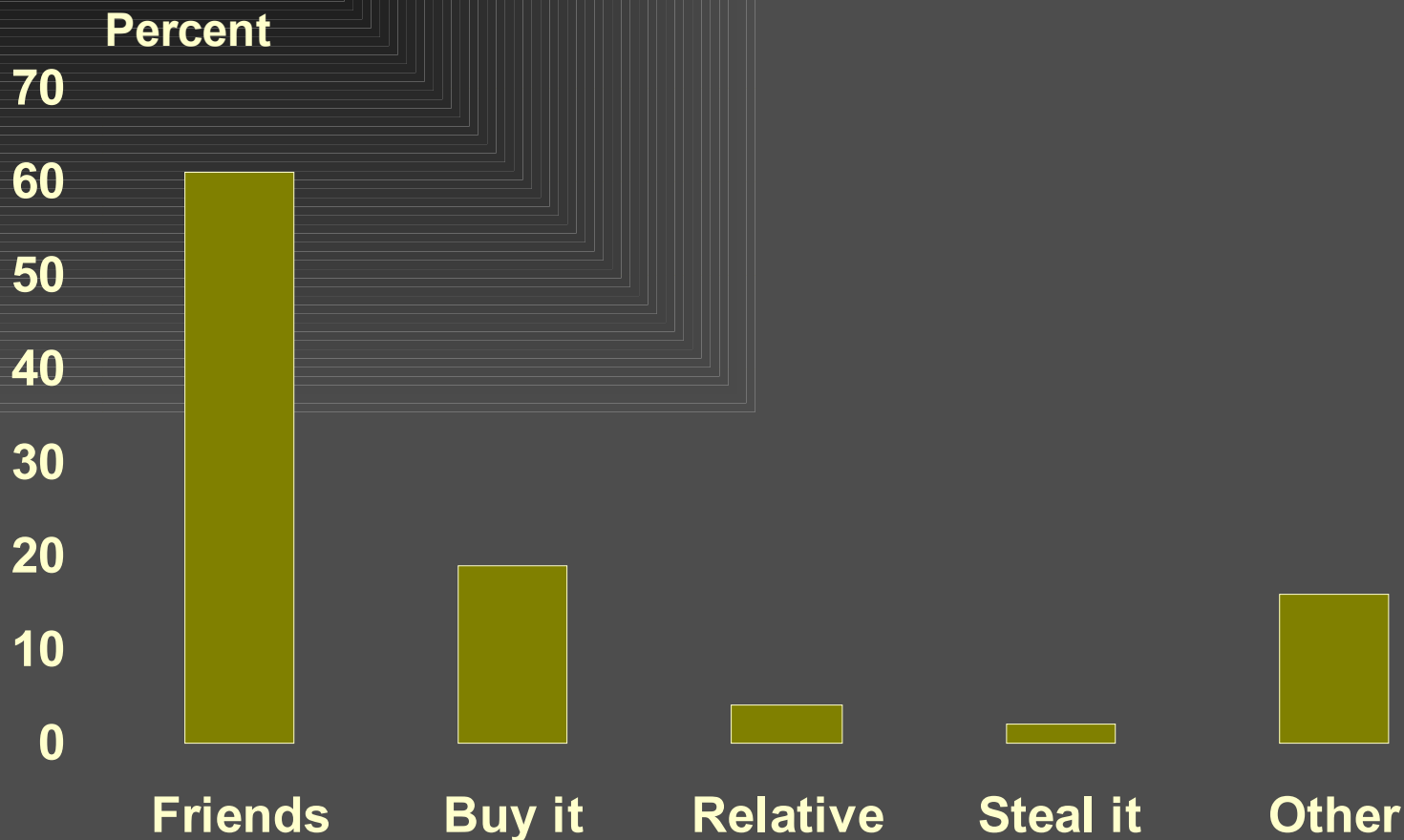


# Poly drug use

- Inhalant users more likely to have used LSD, amphetamines, opiates and cocaine than non-users
- Inhalant users report significantly higher poly drug use than non users
  - Alcohol (45 percent)
  - Cannabis (40 percent)
  - Amphetamines (29 percent)
  - Ecstasy (27 percent)
- If inhalants not available just under half substitute
  - Alcohol (20 percent)
  - Cannabis (13 percent)
  - Amphetamines (5 percent)
  - Ecstasy (4 percent)



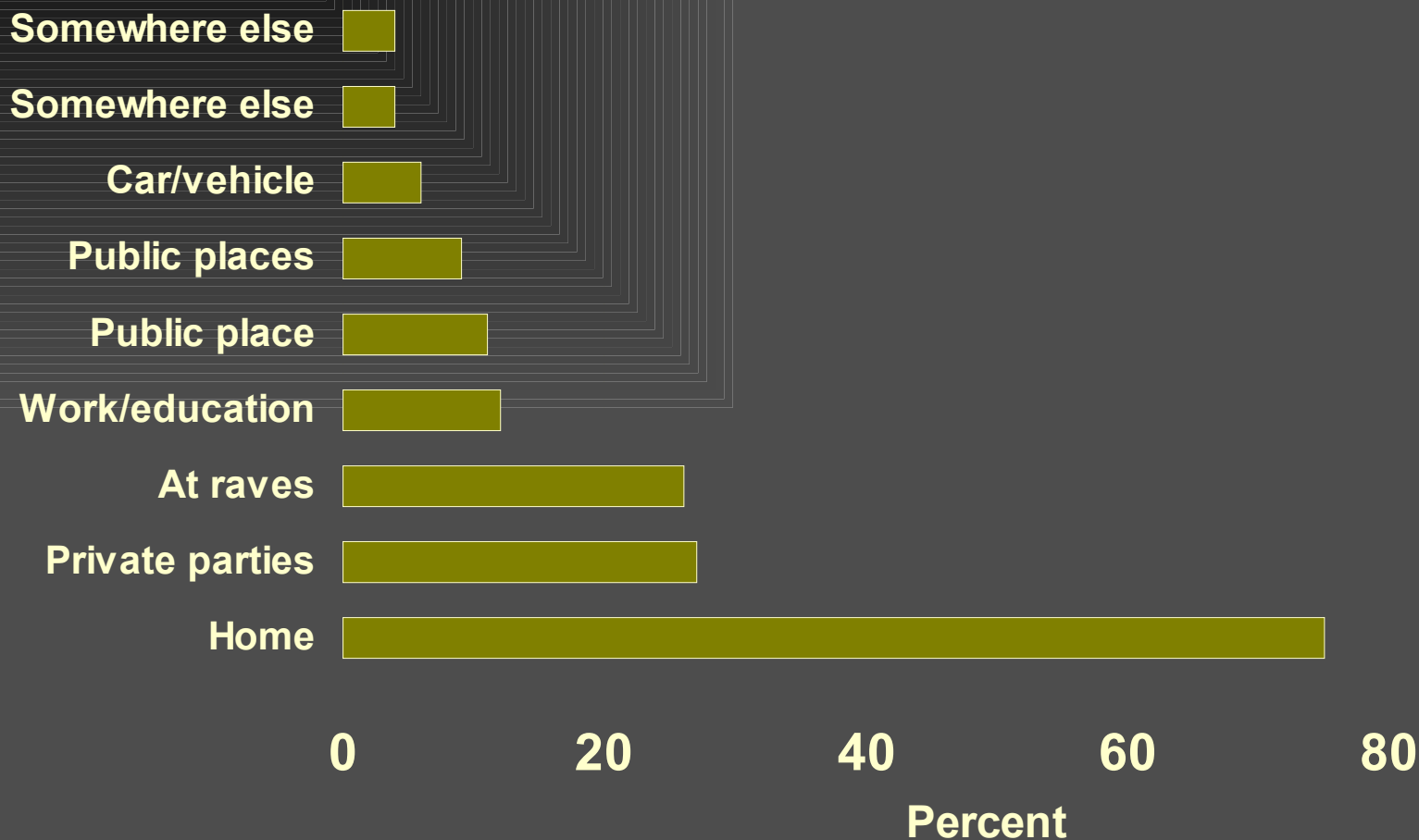
# Where do they obtain inhalants from?



Source: AIHW, 2001 National Drug Strategy Household Survey [Computer File]



# Where do they use it?

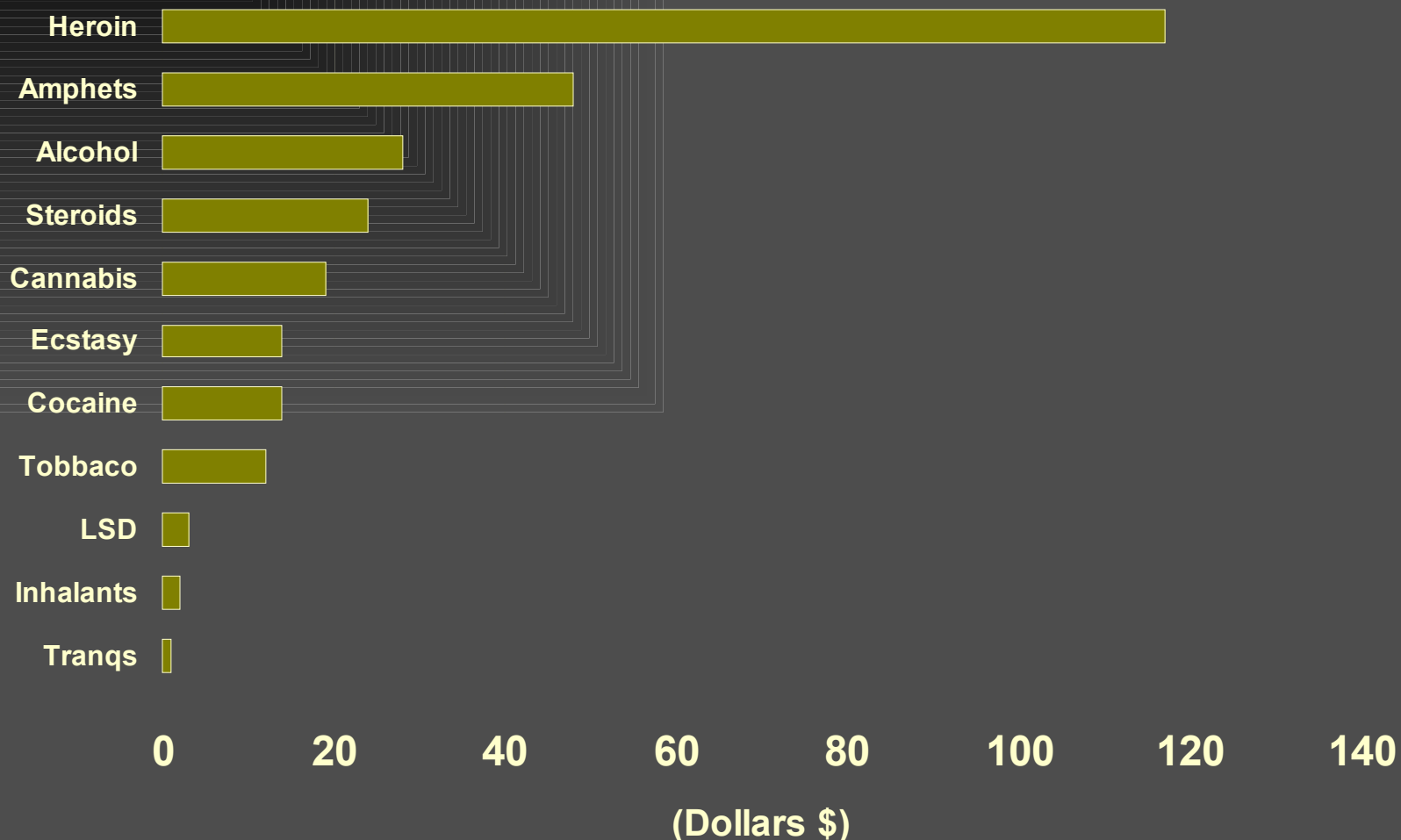


Source: AIHW, 2001 National Drug Strategy Household Survey [Computer File]



# Average weekly amount spent on drugs

(for those who had used in the past 12 months)



Source: AIHW, 2001 National Drug Strategy Household Survey [Computer File]



# Mortality

- Data are very patchy
- WA, 1999, 109 deaths from volatile substances (30 accidental and 70 suicides); includes carbon monoxide poisoning
- National, 1980-87 121 deaths
  - 56 10-19 years

Number of inhalant deaths will be under-recorded

- Suffocation
- Fire related injuries
- Accidents due to impaired judgement, lack of motor skills, high risk behaviour



# Associated behaviours – social and health

- Higher levels of emotional and behavioural problems (National Survey of Mental Health and Wellbeing)
- Lower levels of family support and cohesiveness
- Antisocial personality disorders
- Higher levels of helplessness, depression, lower levels of self esteem
- More likely to attempt suicides



# Associated behaviours – delinquency and crime

Most young people experiment – few escalate to regular use

More likely amongst chronic users

- Regular truanting/Difficulty at school
- Delinquent behaviour
- Vandalism, theft, driving charges
- Violent behaviour

Drug-related crime

Property crime to obtain money/substance for drugs

Violent crime due to intoxication



# Assessing the evidence

Some quantitative data – very little

Some qualitative data – not much

Anecdotal data – quite a lot



# Two fundamental principles to research

- Validity –are we measuring what we think we are
- Reliability – are we sure that we get the same results if we replicate our studies.
- The major sources of information at this time seem to be:
  - National surveys
  - Case studies
  - Key informants
  - Official statistics
  - Media reporting
  - Anecdotal



# National data in perspective

- Variations across communities
- Cyclical/comes in waves
- Example:
  - Western Australia
    - 1980s: *Pure & simple aerosol*
    - Late 80s, early 90s: Kwikgrip glue
    - mid 90s: toluene
    - mid 90s to present: spray chrome paints
- National data are poor at picking up local community trends
  - Sampling frame
  - Sample size
  - Specificity of questions
  - Reporting time frames



# Weaknesses

- Case studies
  - Difficult to generalise
  - Need to ensure consistent methodologies
- Key informants
  - Limited by sources and access to the market or segments of the market
- Official statistics
  - Relevant legislation
  - Level of interdiction
  - Quality of recording practices
  - Existence of support agencies
- Media
  - Sensational, not representative
- Anecdotal
  - Need to develop a methodology for systemise the information



# Why do we need data

- Base line data
  - Allocate resources and inform policy development
  - To evaluate interventions
- On-going monitoring
  - To identify shifts in patterns
  - To response to changes more quickly to facilitate both policy and legislative change
  - To enable effective outcome evaluations of interventions
- Training
  - Credible data to inform the training of relevant practitioners
  - To inform local communities as to the size and scope of the problem so they can assist at the local level
- More funding
  - To build the case you need the evidence base



# Ways forward

- Systematic work on defining the key concepts and developing workable measures
- Systematically document the methodologies used to produce estimates and then develop standards and norms of best practice
- Systematic work on developing methodologies for data collection that can be applied across communities to provide better comparative data
- Improve the quality of data so that key information on the data collection, the methods and the analysis are provided



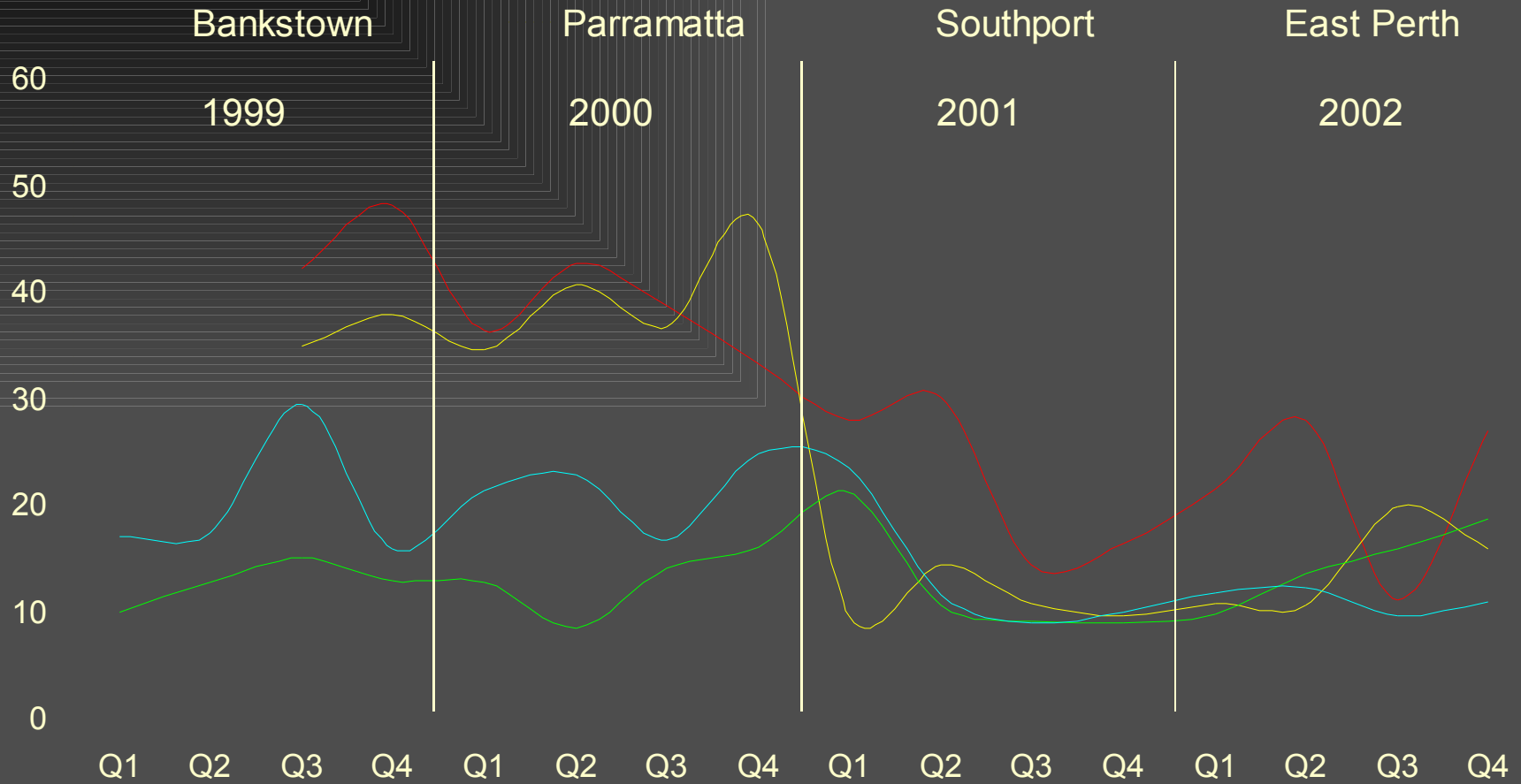
# Need for more localised early warning systems

Quarterly reviews of existing service providers

- youth workers
- 'treatment' providers
- social workers
- local hospitals
- local GPs
- local police
- local legal aid solicitors
- local schools
- Ambulance callouts



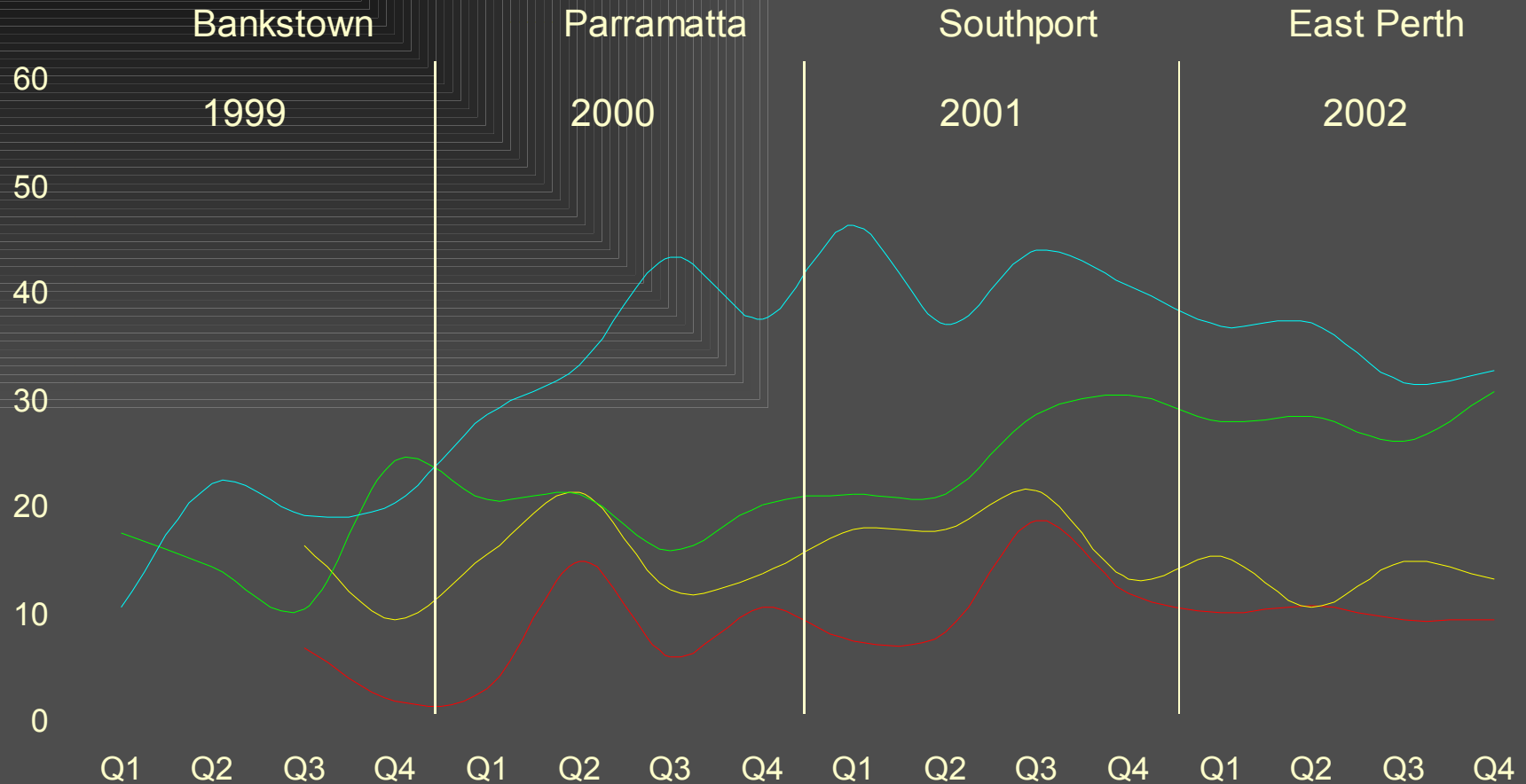
# Percent testing positive to heroin, adult males



Source: AIC, DUMA Collection 1999 - 2002 [Computer file]



# Percent testing positive to methamphetamine, adult males



Source: AIC, DUMA Collection 1999 - 2002 [Computer file]

