Trends in drug-related hospitalisations in Australia, 1999-2018
Findings from Drug Trends

UNSW AUSTRALIA | NDARC National Drug & Alcohol Research Centre

Agata Chrzanowska[1], Timothy Dobbins[1], Nicola Man[1], Louisa Degenhardt[1], Amy Peacock[1]

[1]National Drug and Alcohol Research Centre, UNSW Sydney

The Difference is Research

INTRODUCTION

- Use of illegal substances (e.g., heroin) and of medicines outside the bounds of a doctor's prescription (e.g., pharmaceutical opioids) can lead to a range of harms.
- Routinely-collected healthcare data are an important source of information about changes in the experience of drug-related harms where medical attention was provided.
- For this reason, monitoring trends in drug-related hospital separations in Australia is important.

Terminology

A **hospital separation** (hospitalisation) refers to a completed episode of admitted patient's care in a hospital ending with discharge, death, transfer or a portion of a hospital stay beginning or ending in a change to another type of care.

The **principal diagnosis** is defined as the diagnosis determined after study to be chiefly responsible for occasioning the patient's episode of admitted patient care.

AIM

The aim of this study was to present trends in drug-related hospitalisations in Australia from 1999/00 to 2017/18, including disaggregation by key sociodemographic features and drug type.

METHODS

- Data comprised public and private hospital separations from all jurisdictions in Australia between 1999-2000 and 20017-2018.
- Separations with a care type reported as 'Newborn' (without qualified days), and records for 'Hospital boarders' and 'Posthumous organ procurement' have been excluded.
- Included are only hospital separation where state of hospitalisation equals the state of usual residence as cross border separations were not provided.
- Analyses were undertaken of those hospital separations where a drug of interest was identified as the principal reason for the hospitalisation.
- Alcohol or tobacco were not included.
- The results include numbers of hospital separations and age-standardised rates per 100,000 people, standardised to the 2001 Australian Standard Population.
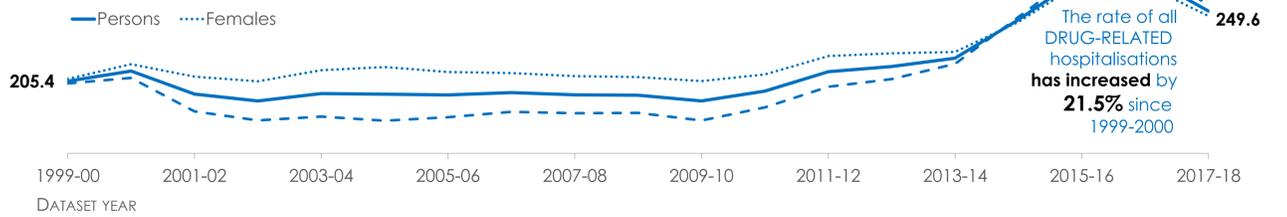
Table 1. Relationship between the drug of interest and the ICD-10-AM codes (modified from AIHW, 2018)

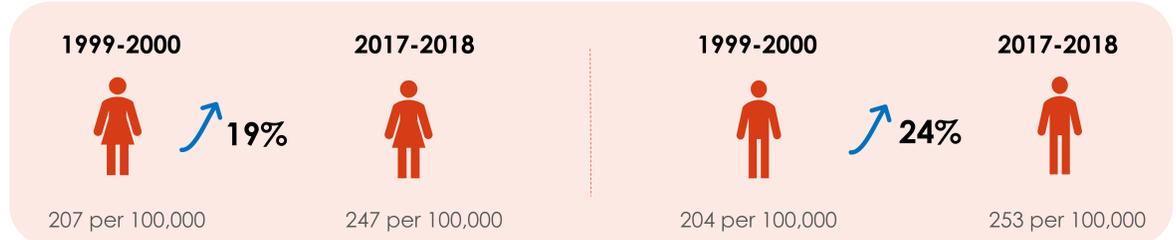| Drug Group/Type	ICD-10-AM
ANALGESICS	
Opioids	F11.0-.9, T40.0-.4 T40.6
Non-opioid analgesics (includes paracetamol)	F55.2, T39.0, T39.1, T39.3, T39.4, T39.8, T39.9
SEDATIVES AND HYPNOTICS (EXCLUDING ALCOHOL)	
Antiepileptic, sedative-hypnotic and antiparkinsonism	F13.0-.9, T41.2, T42.0-.3, T42.5-.8
Benzodiazepines	T42.4
STIMULANTS AND HALLUCINOGENS (EXCLUDING TOBACCO)	
Cannabinoids	F12.0-.9, T40.7
Hallucinogens (includes LSD)	F16.0-.9, T40.8-.9
Cocaine	F14.0-.9, T40.5
Amphetamines and other stimulants	F15.0-.9, T43.6
Other stimulants	T46.0, T46.3
ANTIDEPRESSANTS AND ANTIPSYCHOTICS AND NEUROLEPTICS	F55.0, T43.0-43.5
VOLATILE SOLVENTS	F18.0-.9, T52.0-T52.9, T53.0-T53.9, T59.0, T59.8
MULTIPLE DRUG USE	F19.0-9

RESULTS

Trend in DRUG-RELATED HOSPITAL SEPARATIONS in Australia, 1999-2018

AGE-STANDARDISED RATES (PER 100,000 PEOPLE)

Persons — — — Females ·········

205.4 ... 249.6

The rate of all DRUG-RELATED hospitalisations **has increased** by **21.5%** since 1999-2000

1999-00 2001-02 2003-04 2005-06 2007-08 2009-10 2011-12 2013-14 2015-16 2017-18
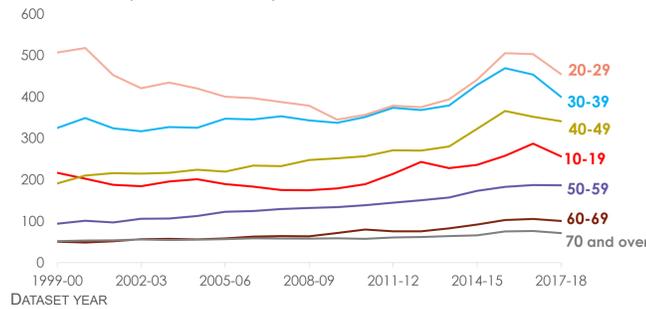DATASET YEAR

There were **60,597** drug-related hospital separations among Australians in 2017-18. The rate has increased by **21.5%** (from 205.4 to 249.6 separations per 100,000 people) since 1999-2000.

Trends by GENDER

1999-2000		2017-2018		1999-2000		2017-2018
	19%				24%	
207 per 100,000		247 per 100,000		204 per 100,000		253 per 100,000

Trends by AGE (in years)

AGE SPECIFIC RATES (PER 100,000 PEOPLE)

- 20-29
- 30-39
- 40-49
- 10-19
- 50-59
- 60-69
- 70 and over

1999-00 2002-03 2005-06 2008-09 2011-12 2014-15 2017-18
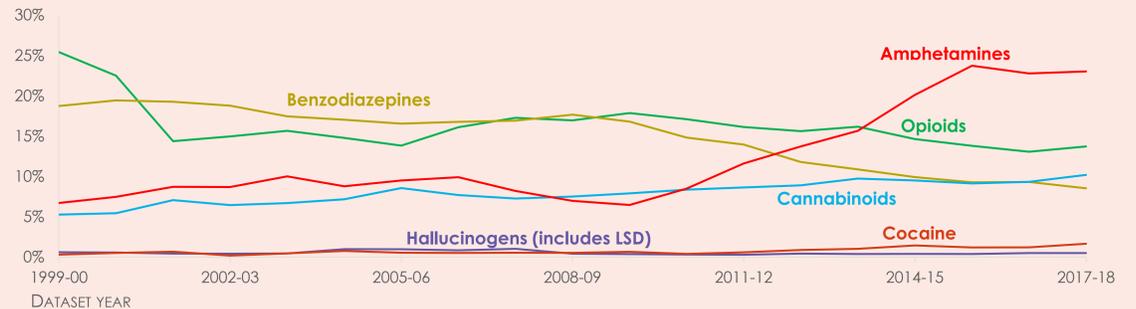DATASET YEAR

Despite the drop since 1999-00, the rate of drug-related hospitalisations remained **highest** for people aged **20-29 years.**
Over the part 19 years, there has been an **increase** in number of drug-related hospital separations among Australians aged **40 and over**.

% changes from 1999-00 to 2017-18

Age:
- 10-19 years — 18%
- 20-29 years — 10%
- 30-39 years — 23%
- 40-49 years — 79%
- 50-59 years — 99%
- 60-69 years — 99%
- 70 and over — 37%

Trends by DRUG

PERCENT OF ALL DRUG INDUCED HOSPITAL SEPARATIONS

- Amphetamines
- Benzodiazepines
- Opioids
- Cannabinoids
- Hallucinogens (includes LSD)
- Cocaine

1999-00 2002-03 2005-06 2008-09 2011-12 2014-15 2017-18
DATASET YEAR

- **Amphetamines** accounted for **23%** of all drug-related hospitalisations in 2017-2018; rates **increased** by over **300%** since 1999-00, with an increase between 2009-10 and 2015-16.
- **Opioids decreased** by **34%** since 1999-00 and were the second most common cause of drug-related hospitalisations in 2017-18.
- **Cannabinoids** showed an **increasing** trend in hospital separations; the rates increased from 10.8 (in 1999-00) to 25.5 (in 2017-18) per 100,000 people.
- **Benzodiazepines decreased** by **half** since 1999-00 and accounted for **10%** of drug-related hospital separations in 2017-18.
- **Cocaine** remained responsible for a small number of hospital separations however the rates are showing an **increasing trend** since 2010-11.
- **Hallucinogens (incl LSD)** – rates stable and small between 1999-00 and 20017-18.
- **Multiple drug use** – rates **increased** by **32%** since 1999-00 reaching the rate of 37.5 per 100,000 people in 2017-18.

IMPLICATIONS

These data provide critical information on trends in harms related to use of various substances, identifying potential emerging trends of concern, and providing a greater evidence base for the development of policy responses and interventions in relation to these harms.

References

Australian Institute of Health and Welfare (AIHW) 2018. Drug related hospitalisations. Cat. no. HSE 220. Canberra: AIHW. Accessed 09 October 2019.

Data source

AIHW, National Hospital Morbidity Databases from 1999-00 to 2017-18.

DRUG TRENDS