CHARACTERISING PEOPLE ATTENDING NSW EMERGENCY DEPARTMENTS AND HOSPITALS FOR AN ALCOHOL-RELATED PROBLEM, 2005-2014: THE DATA-LINKAGE ALCOHOL COHORT STUDY (DACS)

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Acknowledgements

- Participants who form this cohort
- Centre for Health Record Linkage (CHeReL) and data custodians
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Conflicts of Interest

- Amy Peacock: untied educational grant from Mundipharma and Seqirus for study of opioid medications
- Louisa Degenhardt: untied educational grant from Mundipharma, Seqirus and Indivior for study of opioid medications
- Sarah Larney: untied educational grant from Indivior or study of opioid medications
Background

• Approximately 3.9% of deaths and 1.8% of hospitalisations in Australia are alcohol-related (Gao et al., 2015).

• Much of our understanding of the burden of alcohol-related problems is based on modelled estimates or on aggregated number of presentations to hospital services.

• Data-linkage is a method of combining information that relates to an individual entity from within or across multiple existing sources.

• Data-linkage means we can longitudinally study people with alcohol-related problems at the population level to measure mortality, morbidity and other problems (e.g., offending).

AIMS

1. Describe the cohort at their first point of contact with emergency department or inpatient hospital services;

2. Quantify healthcare service utilisation and law enforcement engagement) and assess individual and situational characteristics as predictors of frequency of engagement;

3. Quantify mortality, morbidity, offending and incarceration amongst the cohort; and

4. Assess individual and situational characteristics as predictors of mortality, morbidity, offending and incarceration.
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Cohort Definition:
Anyone with an alcohol-related diagnosis in an ED/hospital record between 1 Jan 2005-31 Dec 2014
### Types of alcohol-specific diagnoses (primary or secondary field)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic effect of alcohol</td>
<td>9,601 (5.0)</td>
</tr>
<tr>
<td>Accidental poisoning by and exposure to alcohol (X45)</td>
<td>1,789 (0.9)</td>
</tr>
<tr>
<td>Intentional self-poisoning by and exposure to alcohol (X65)</td>
<td>6,721 (3.5)</td>
</tr>
<tr>
<td>Poisoning by and exposure to alcohol, undetermined intent (Y15)</td>
<td>1,269 (0.7)</td>
</tr>
<tr>
<td>Alcohol-induced endocrine and metabolic diseases (E24.4, E51.2)</td>
<td>342 (0.2)</td>
</tr>
<tr>
<td>Alcohol intoxication (F10.0, F10.1)</td>
<td>119,722 (62.8)</td>
</tr>
<tr>
<td>Alcohol dependence syndrome (F10.2)</td>
<td>45,288 (23.8)</td>
</tr>
<tr>
<td>Alcohol withdrawal (F10.3, F10.4)</td>
<td>15,242 (8.0)</td>
</tr>
<tr>
<td>Alcoholic psychosis (F10.5, F10.6, F10.7)</td>
<td>6,747 (3.5)</td>
</tr>
<tr>
<td>Disease of nervous system due to alcohol (G31.2, G62.1, G72.1)</td>
<td>976 (0.5)</td>
</tr>
<tr>
<td>Alcohol cardiomyopathy (I42.6)</td>
<td>1,067 (0.6)</td>
</tr>
<tr>
<td>Alcohol-induced chronic gastritis (K29.2)</td>
<td>3,923 (2.1)</td>
</tr>
<tr>
<td>Alcoholic liver disease (K70)</td>
<td>10,442 (5.5)</td>
</tr>
<tr>
<td>Alcohol-induced pancreatitis (K85.2, K86.0)</td>
<td>3,512 (1.8)</td>
</tr>
</tbody>
</table>

**Total diagnoses:** N=208,143

**Emergency department:** n=49,339

**Hospital:** n=141,230
At index presentation:

- 66.2% Coded as male
- 42.9% Aged 12-34 years
- 69.0% Resided in major cities
- 28.3% Most disadvantaged SES
- 74.4% ‘Emergency status’
- 1.1% Died at index

Follow-up (Dec, 2014):

- 14.4% Died
- 3.3% Mental health ambulatory contact
- 9.8% Alcohol-related ED attendance
- 31.2% Alcohol-related hospital separation
- 29.1% Proven offence charge
Conclusions

• Comprehensive population-level understanding of the engagement of people with alcohol-related problems (as defined by presentation to acute/inpatient services) with healthcare services and law enforcement.

• Data on alcohol consumption, as well as intervention and treatment, are not captured. Capture of alcohol involvement in emergency department attendances and hospital separations through diagnosis codes is also not complete, and we have focused on diagnoses 100% attributable to alcohol.

• Our next steps:
  • Study repeat attendees and identify possible impacts on acute/inpatient service utilisation by intervening at different cut-offs; and
  • Study first presentation by young people and identify predictors of subsequent escalating problems.
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