IMPACT OF ALCOHOL AND DRUGS ON AUSTRALIAN COASTAL DROWNING DEATHS

Dr. Jaz Lawes
Coastal Safety Researcher Surf Life Saving Australia
ALCOHOL AND DRUGS USE

~19% of coastal drowning deaths have been attributed to alcohol and drugs

- Alcohol (Ethanol) is a depressant.
- The effects differ from person to person.
- The more consumed, the stronger the effects on the body.
- There is no amount of alcohol that can be said to be safe for everyone (AIHW).

- Drug misuse whether prescription, over the counter or combination, can affect psycho-motor performance and cognitive functions.
- When it comes to drug use, individual reactions and experiences vary.
- There is no safe level of drug use when it comes to Illicit drugs. There is always a risk (ADF).

AIM: to examine the characteristics of alcohol and drug-related coastal drowning deaths

Q. HOW MANY STANDARD DRINKS DO YOU THINK ARE REASONABLE TO CONSUME BEFORE UNDERTAKING THE FOLLOWING ACTIVITIES?

Land-based fishing: 51%
Rock fishing / Fishing from rocky areas: 69%
Watercraft: 70%
Swimming: 75%
Boating (as a driver or skipper): 75%
Surfing: 76%
Jet ski/Personal Water Craft: 83%
Snorkelling: 85%
Scuba diving: 91%
<table>
<thead>
<tr>
<th>BAC LEVEL</th>
<th>GENERALIZED DOSE SPECIFIC EFFECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.020-0.039%</td>
<td>Below</td>
</tr>
<tr>
<td>0.040-0.059%</td>
<td>Legal Limit</td>
</tr>
<tr>
<td>0.06-0.099%</td>
<td>Above legal limit</td>
</tr>
<tr>
<td>0.100-0.149%</td>
<td>2 x</td>
</tr>
<tr>
<td>0.150-199%</td>
<td>3x</td>
</tr>
<tr>
<td>0.200-0.249%</td>
<td>4x</td>
</tr>
<tr>
<td>0.250-0.399%</td>
<td>5-7x</td>
</tr>
<tr>
<td>0.40% +</td>
<td>8 x</td>
</tr>
</tbody>
</table>
METHODOLOGY

INCLUSION CRITERIA

• Alcohol (all content) *excluding* alcohol from decomposition
• Alcohol and Drug(s) (All types, e.g. Illicit, Prescription)
• Illicit Drugs
• Prescription Drugs in excess of therapeutic use
• Over the counter medication in excess of therapeutic use
• Prescription and Over the Counter Drugs combination
• Mixed Multidrug Drug Combinations and Toxicity
• Other e.g. harmful substances in excess that may have contributed to the individual’s death e.g. carbon monoxide, poisons etc...

Media articles and National Coronial Information System (NCIS)

Autopsy and Toxicology Reports

National Fatality Database
NATIONAL SNAPSHOT: DROWNING UNDER THE INFLUENCE

315 since 2004

86% Men | 14% Women

Both (29%)
Drugs (35%)
Alcohol (36%)

<table>
<thead>
<tr>
<th>Year</th>
<th>Both</th>
<th>Drugs</th>
<th>Alcohol</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>15</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>2005-06</td>
<td>29</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>2006-07</td>
<td>27</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>2007-08</td>
<td>18</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>2008-09</td>
<td>22</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>2009-10</td>
<td>27</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>2010-11</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2011-12</td>
<td>27</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>2012-13</td>
<td>18</td>
<td>17</td>
<td>51</td>
</tr>
<tr>
<td>2013-14</td>
<td>91</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>2014-15</td>
<td>48</td>
<td>63</td>
<td>63</td>
</tr>
<tr>
<td>2015-16</td>
<td>27</td>
<td>0.35</td>
<td>0.35</td>
</tr>
<tr>
<td>2016-17</td>
<td>23</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>2017-18</td>
<td>14</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>2018-19</td>
<td>8</td>
<td>0.06</td>
<td>0.06</td>
</tr>
</tbody>
</table>
NATIONAL SNAPSHOT: DROWNING UNDER THE INFLUENCE

72% are between 20-54 years

ACTIVITIES
1. Swimming/Wading (27%)
2. Boating (18%)
3. Fall (11%)
4. Watercraft (7%)
5. Rock Fishing (6%)

LOCATION
1. Beach (43%)
2. Rock/Cliff (16%)
3. Offshore (15%)
4. Bay (12%)
5. Port/Marina (7%)

49% > 5 km from Surf Lifesaving Services

Metropolitan and regional issue!
ALCOHOL-RELATED DROWNING DEATHS – 205 CASES

- 65% had consumed alcohol (almost half had also taken drugs)
- 87% ABOVE the legal limit
- 25% were 4x ABOVE the legal limit
- 40% occurred at a beach
- 49% > 5 km

ACTIVITIES
1. Swimming/Wading (32%)
2. Boating (18%)
3. Fall (14%)
4. Rock Fishing (5%)
5. Snorkelling (3%)
DRUG-RELATED DROWNING DEATHS – 202 CASES

64% had taken some form of drug(s)
29% (about half) also had alcohol in their system

DRUG TYPE: Key demographics
65% ILLICIT: 20-49 year olds
47% PRESCRIPTION: 40-59 year olds
11% OVER THE COUNTER: 65-69 year olds

47% occurred at a beach

ACTIVITIES
1. Swimming/Wading (25%)
2. Boating (16%)
3. Fall (11%)
4. Watercraft (10%)
5. Rock Fishing (4%)

Top 3 Drugs
1. THC (Cannabis)
2. Amphetamines
3. Prescription

48% > 5 km
CASE STUDY – MEN AGED 16-39

National Drowning Context

<table>
<thead>
<tr>
<th></th>
<th>2004-19</th>
<th>2018-19</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drowning deaths</td>
<td>40</td>
<td>44</td>
<td>2.05:1</td>
</tr>
<tr>
<td>mortality rate / 100,000 pop</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23% attributed to alcohol and drugs

Top 3 Substances

- **ALCOHOL USE**
  - 0.16 BAC > 3 x legal limit!

- **CANNABIS USE**
  - 2.08:1 Young male : Other adults

- **AMPHETAMINE USE**
  - 2.71:1 Young male : Other adults

40 Drowning deaths annually (2004-19)
44 Drowning deaths (2018-19)
2.05:1 Young male : Other adults mortality rate / 100,000 pop
23% attributed to alcohol and drugs

National Drowning Context

- Alcohol: 25%
- Drugs: 39%
- Alcohol and Drugs: 36%
IMPLICATIONS FOR DROWNING PREVENTION

- **Research** on gaps and identify risk factors
- **Strengthen** Public Awareness
- **Enforce** effective policies
- **Team up** with sectors and organizations
THANK YOU