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# Medications, Drugs, Alcohol & Drowning

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NATIONAL DROWNING PREVENTION SUMMIT 2014

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# Drowning in Victims of Retirement Age

- A review of every drowning fatality in Australia aged 65 years and over
- Review of drowning data identified:
  - 513 victims between 2002-2012
  - Males 366 (71%) : Females 147 (29%)
  - Average rate 1.86 / 100,000 population
    - Australian average rate 1.40 / 100,00 population

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# Drowning Victims of Retirement Age

- Descending rank order of site and activity of drownings
  - Watercraft incidents on the ocean / harbour
  - Beach drownings whilst swimming
  - Swimming pool drownings whilst swimming
  - Falls into streams
  - Inadvertent falls into swimming pools

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# Pre-existing medical conditions

- Pre-existing medical conditions 68.4%
- Contributory medical conditions
  - 188 victims (37% of cases)
- Commonly occurring contributory conditions
  - Cardiac disease (13.5%)
  - Dementia (10.3%)
  - Non-specific frailty (7.4%)

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# Pre-existing medical conditions

- Cardiac conditions whilst swimming
- Dementia & frailty leading to falls into water
- 1 in 8 senior people who drown had pre-existing contributory cardiac conditions
- 1 in 10 suffer from dementia and fall into water
- 22% of those with pre-existing medical conditions had co-morbidities each of which were deemed significant to the drowning incident

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# Alcohol

- Blood Alcohol detected (16.7%)
- Blood Alcohol >0.05g/L (upper legal limit for driving or boating)
  - 56 victims – 11% of all drowning victims 65+
- 4.7% had combined therapeutic drugs and alcohol of such concentrations they were deemed significant to the drowning

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# Drugs

- Drug levels detected at autopsy (34.8%)
  - Therapeutic or sub-therapeutic
- No victims recorded positive readings for illegal drugs
- 20 victims (3.9%) had high post-mortem levels of therapeutic drugs deemed significant in the drowning episode

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# Drugs

- Commonly occurring drugs
  - Temazepam – 20 (3.9%)
  - Diazepam – 19 (3.7%)
  - Codeine – 17 (3.3%)
  - Oxazepam 13 (2.5%)
  - Tramadol 8 (1.6%)
- Drug profiles 1-9 medicaments (average 2 medicaments)

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# Implications for drowning prevention

- Recognise risks of combining aquatic activity with multiple medications (and alcohol)
- Recognise risks of combining aquatic activity with underlying medical conditions
- Aquatic activities slow the natural rate of physical deterioration associated with ageing
  - But how to encourage this safely?

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# Implications for drowning prevention

- Encourage regular medical check ups, especially prior to undertaking aquatic activity
- Undertake aquatic activity at supervised venues such as public pools and patrolled beaches
- Highlight increased risk of drowning when combining multiple medications or alcohol and medication

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