



Royal Perth
Hospital



THE UNIVERSITY OF
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Direct cost of alcohol-related presentations to the Royal Perth Hospital Emergency Department

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Introduction

- Alcohol misuse **affects millions** globally and imposes a **substantial cost** on society
- **3 million alcohol-related deaths** annually¹
- 5.1% of the global health burden¹
- Lifetime Risk²:



1 in 4



1 in 10



- EDs play an **essential role** in responding to alcohol-related harm
- Alcohol-related ED presentations around the world:
 - Belgium – 1.2%⁴
 - USA – 28%⁵
- **1 in 7** Australian ED presentations were alcohol-related and sometimes up to **1 in 3**⁶
- Previous studies have reported that alcohol-related presentations are **associated with higher costs**⁷⁻¹⁰

Aim

To quantify the direct cost of all alcohol-related presentations to the Royal Perth Hospital Emergency Department



Method

- **Alcohol Harm in Emergency Departments (AHED) Study**
 - Prospective Observational Study
 - 168 hours in December 2014
 - Across 8 Emergency Departments in Australia and New Zealand
- **Royal Perth Hospital Emergency Department¹¹**
 - 1620 patients presented to ED
 - 1403 (86.6%) patients were screened
 - 213 (13.1%) patients were considered Alcohol Positive
 - **206 (12.7%) Alcohol Positive patients** had costing data available



Alcohol Positive Patient

- Acute or remote alcohol-related presentation
- Patient stated they had an alcohol-related presentation;
- Consumption of alcohol within 6 hours prior to triage
- Had intentional or unintentional injuries that were suspected to be caused by a third party affected by alcohol
- **Absence of the above criteria** was classified as Alcohol Negative

Activity Based Funding

- Determined by the **Independent Hospital Pricing Authority**
- Nationally consistent method of classifying patients, treatments and costs

Price of an ED ABF Activity =

(Price weight x (1 + Indigenous Adjustment + Remoteness Area Adjustment) x (1 + Treatment Remoteness Area Adjustment) x (1 + Emergency Care Age Adjustment)) x **National Efficient Price**

- Only **direct costs** were considered

Results

- **Alcohol Positive Patients:**

- Total direct cost during the study week: **\$121, 619**
- Mean direct cost per patient: **\$590**

Estimated cost of **\$6.3 million** per annum

- **Including missing patients:**

- 217 patients were not screened
- 32 patients could have been deemed alcohol positive

Estimated cost of **\$7.5 million** per annum

Direct Costs

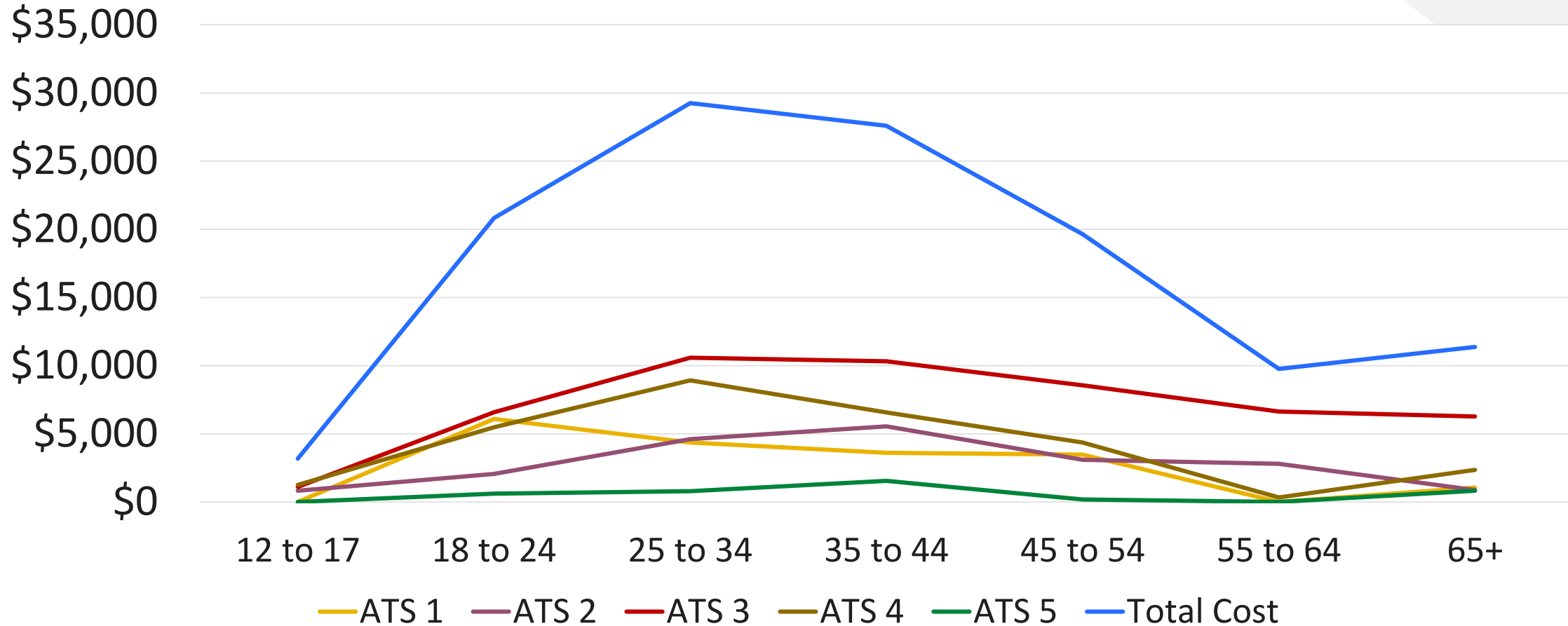
Alcohol Positive

Component	Mean Cost	Total Cost
Health Service	\$590	\$121,619
ED Service	\$427	\$87,919

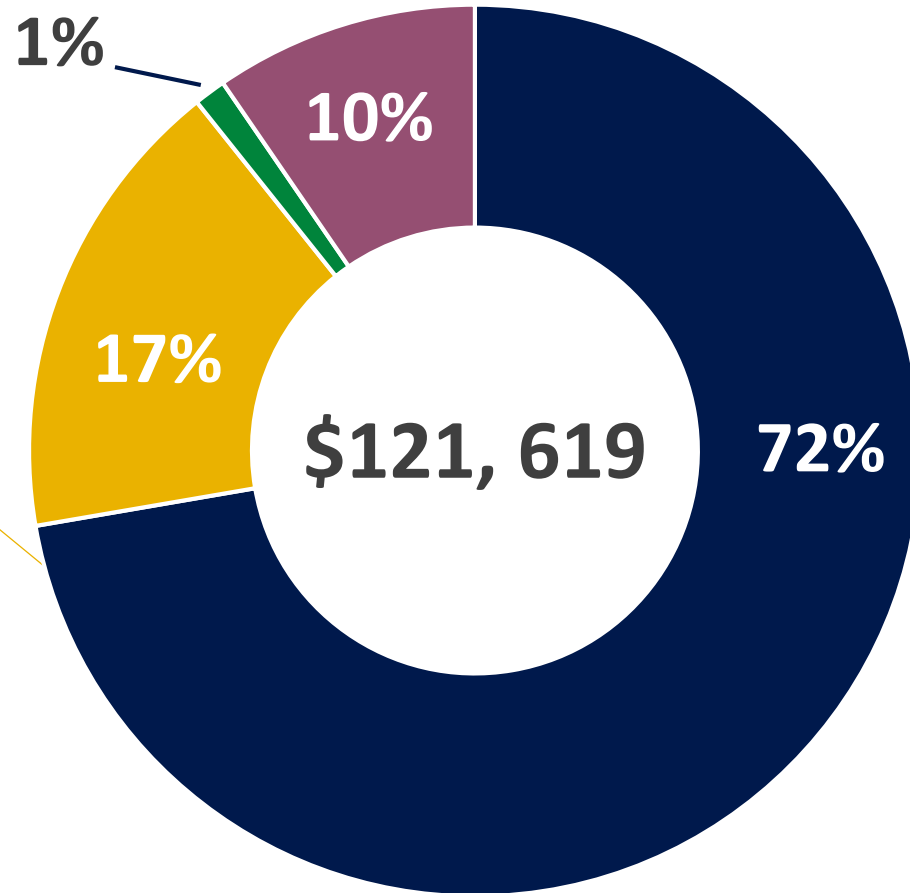
Alcohol Negative

Component	Mean Cost	Total Cost
Health Service	\$575	\$668,733
ED Service	\$426	\$495,295

Total direct health service costs attributable to the Australian Triage Scale

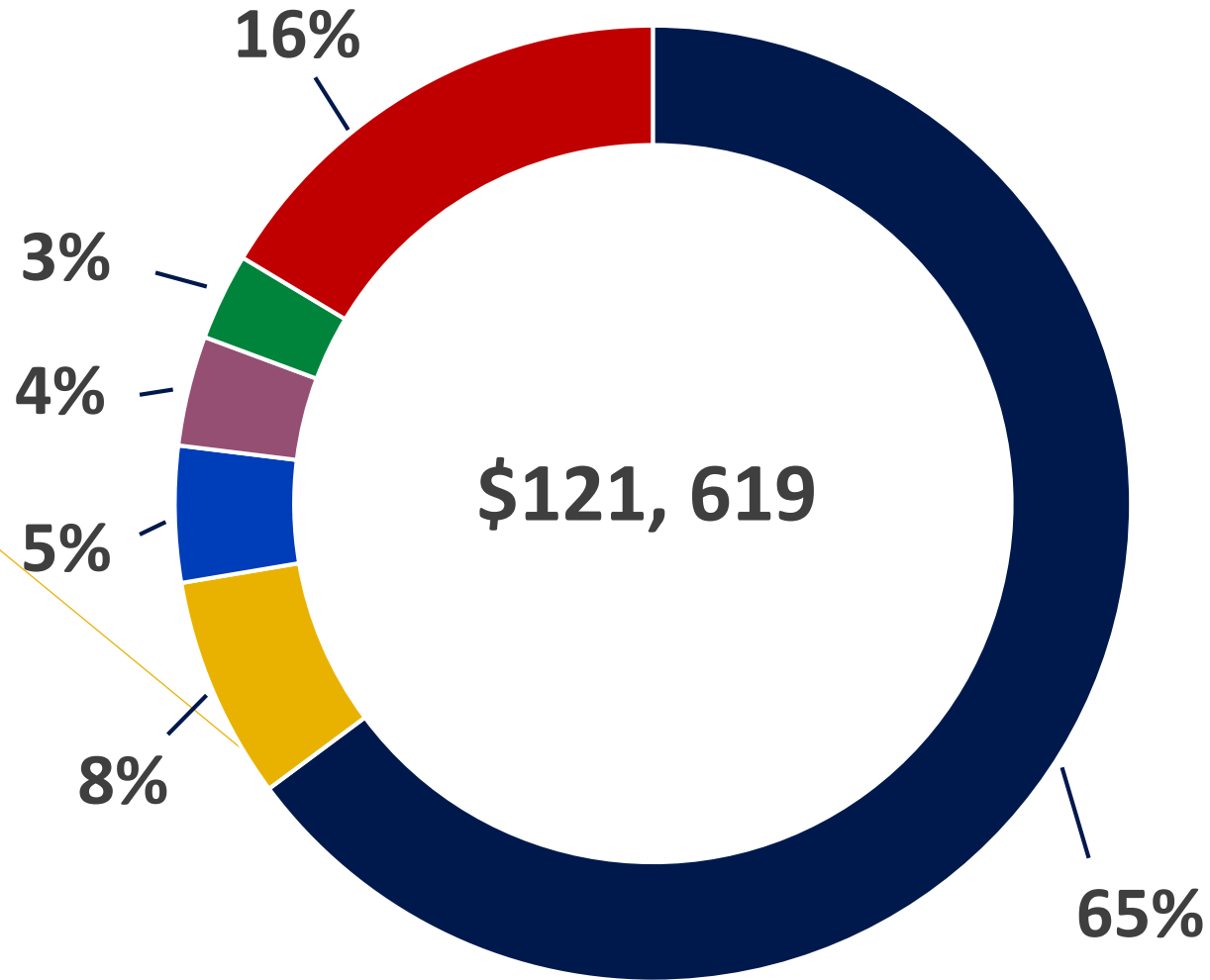


Cost components of total health service cost



- **Emergency Department: \$87,924**
- **Radiology: \$20,658**
- **Pathology and Pharmacy: \$11,634**
- **Allied Health: \$1,403**
- Total Cost: \$121, 619**

Cost components to the ED



- Salaries: \$78,847
- Overheads: \$19,947
- Pathology: \$9,140
- Medical Supplies: \$5,592
- Bed: \$4,525
- Pharmacy: \$3,568
- Total Cost: \$121,619**

Key Findings

- Mean direct cost of **\$590** per alcohol positive patient
- Extrapolated annual figure of **\$7.5 million** is substantial
- Costs were largely driven by **staff salaries** and **overhead costs**
- Mean direct cost of alcohol-positive was **similar** to alcohol-negative
- Understanding these costs are important in developing interventions to **reduce alcohol-related harm**

Limitations

- Single site study
- Study period was a week in December
- Conservative figures due to missing data
- Age and casemix of Alcohol Negative patients were significantly different from Alcohol Positive patients



Thank You

Questions?

Acknowledgements

- **Supervisors:** Prof Daniel Fatovich, Prof Elizabeth Geelhoed
- **RPH BIU:** Vivian Toh, Rinaldo Ienco
- **AHED Investigators:** Prof Diana Egerton-Warburton, Dr Andrew Gosbell, Angela Wadsworth, Katie⁴ Moore, Prof Drew Richardson and Prof Daniel Fatovich

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