

Costing emergency department care

A national study

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IHPA

Overview

- Background
- Methodology for the project
- Outcomes

Acknowledgments

- State and territory health departments
- Study hospitals, clinicians and other hospital staff
- Australasian College for Emergency Medicine
- College of Nursing Australasia
- Health Policy Analysis

Background

What prompted all this?...

Emergency care in Australia

- 285 emergency departments
- 7 million presentations
- Broadly defined for ABF in two categories:
 - Emergency departments
 - Emergency services

Background

- Current classifications for emergency care based on visit type, triage, episode end status and diagnosis
- Historical costing processes largely based on episode end status and triage
- Systems were ok but we knew we could do something better

Investigative Review

- Investigative review of classification systems for emergency care services (completed in 2014)
- Concluded current classifications are not suitable for long term use
- Recommended development of new classification, underpinned by a targeted costing study

Emergency care costing and classification project

- Commenced in 2015
- Engaged consortium led by Health Policy Analysis
- Costing study
- Classification development
- Data development

Costing Study

All the good bits

Study objectives

- Inform classification development
- Test cost drivers identified in the Investigative Review
- Value add to existing/future costing
- Include a representative sample of Australian public hospitals
- Clinical consultation support

Costing study timeframe

Methodology development and consultation
Aug – Nov

Pilot study
Nov – Dec

Main data collection
Apr – Jun

Costing period
Jul – Nov

Site close out
Feb – Apr

Finalisation of costing study
Apr – Jun

2015

2016

2017

Activity data due
Mid Aug

Draft and final cost data due
Oct – Dec

Support infrastructure

- Extensive study documentation and other resources
- Field Management Teams
- Project specific committees
- Study website
- Technology assisted data collection and validation

Study sample

- Sites were nominated by states and territories
- 10 hospitals – included specialist paediatric, major city and regional/ remote
- No emergency services were nominated to participate

Type	#
Specialist paediatric	1
Large ED – major cities	3
Large ED – regional	2
Other ED – major cities	1
Other ED – regional	2
Other ED – remote	1
Emergency services	0
Total sites	10

Data collection

- One month pilot study
- Primary one month data collection between April to June 2017
- Remainder of 2015-16 financial year activity data (routinely reported)
- Clinician time consensus study
- Costed activity data

Key data items

- Focus on data that was not routinely / consistently reported
- Two-week intensive collection of clinician time
- Four week collection of investigations / procedures; presenting problem; additional diagnoses; and 'diagnosis modifiers'

Costing process

- Aligned with the Australian Hospital Patient Costing Standards v3
- Hospitals undertook costing
- Costing Technical Group
- Validation processes to compare study results with standard processes
- Bespoke relative value units for costing

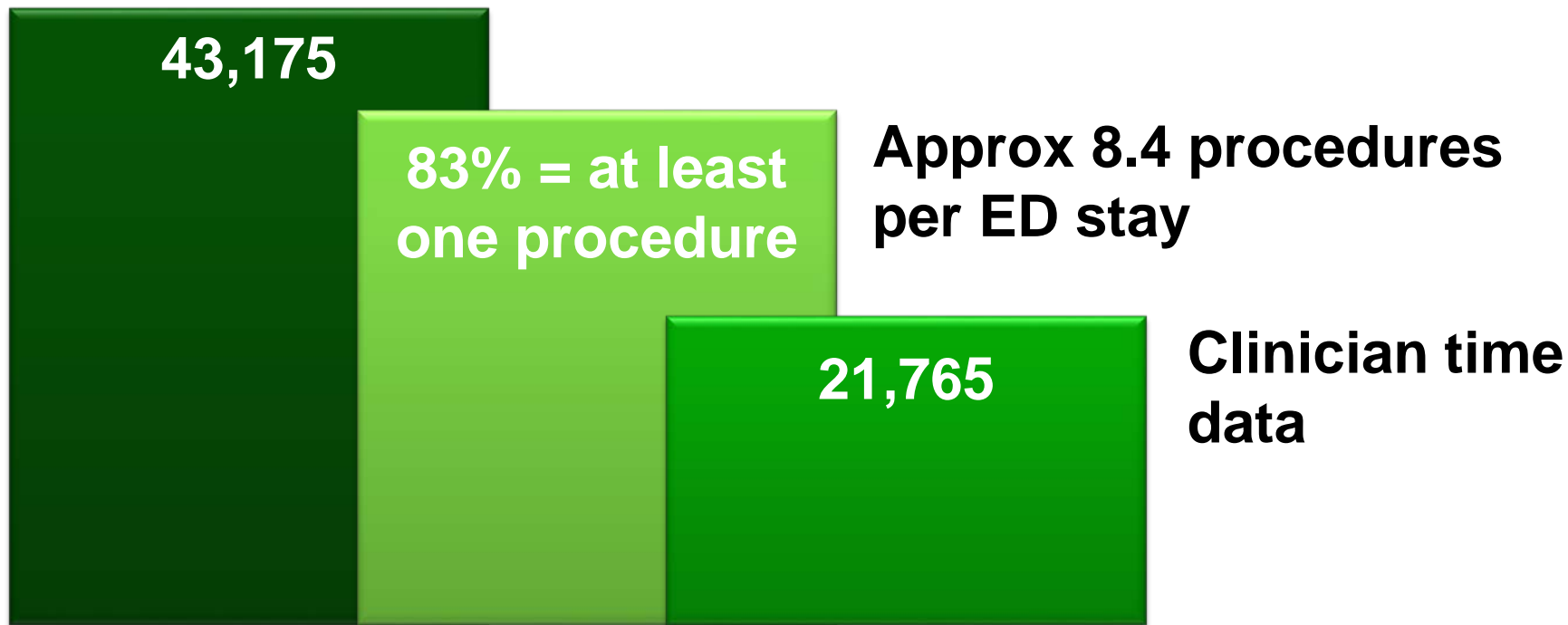
Relative value units (RVUs)

- Previously based on triage and episode end status
- Study RVUs based on clinician time and other utilisation indicators / measures
- Three sets of RVUs: one for each data collection period

Outcomes

What did we learn?

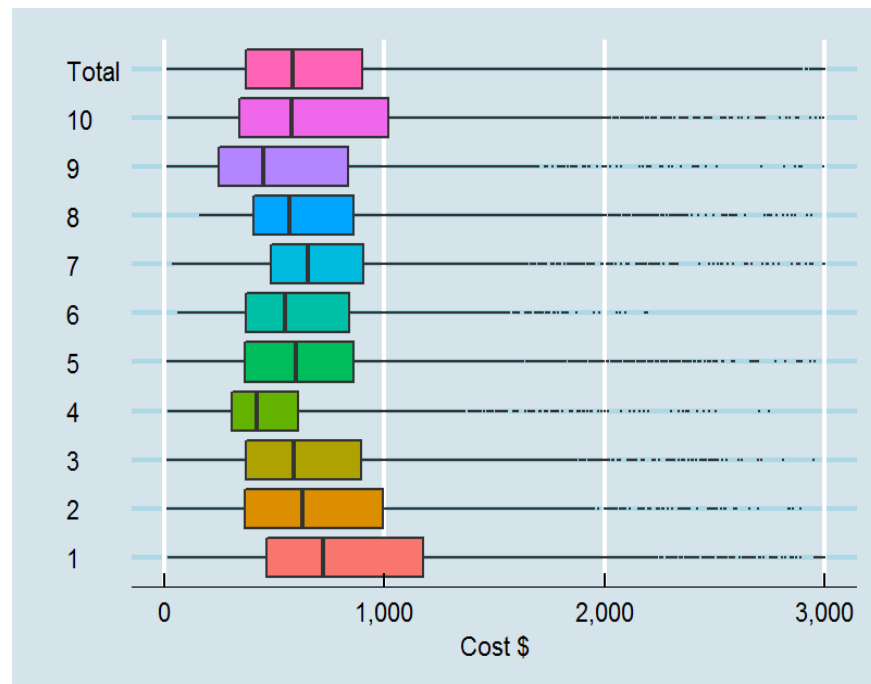
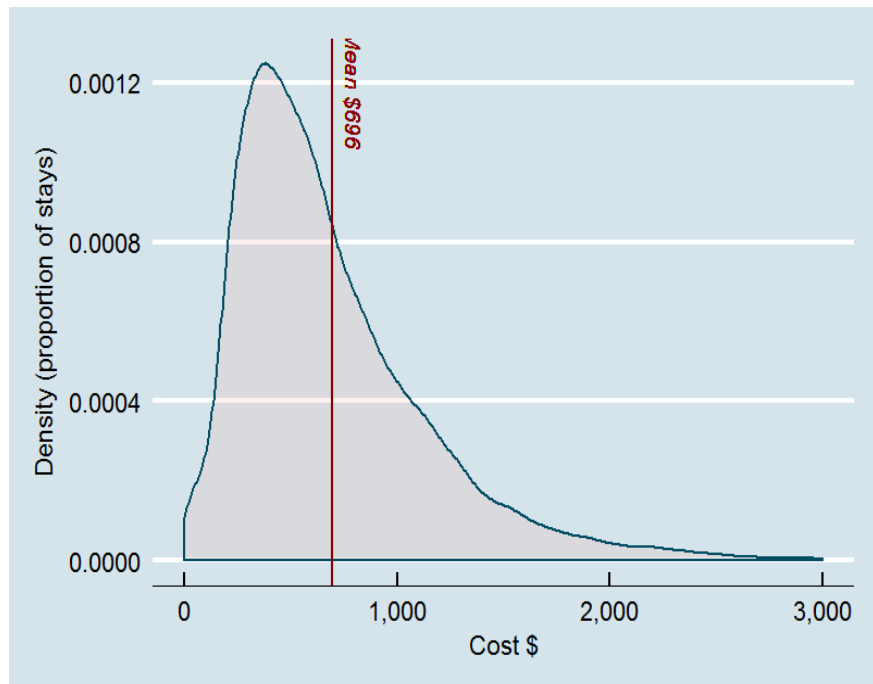
Overview



Overall cost characteristics

Measure	Total	Location		Size	
		MC	RegR	Large	Other
Mean cost \$	696	704	679	707	722
Median \$	578	588	547	598	588
n	43,175	28,154	15,021	28,666	11,505

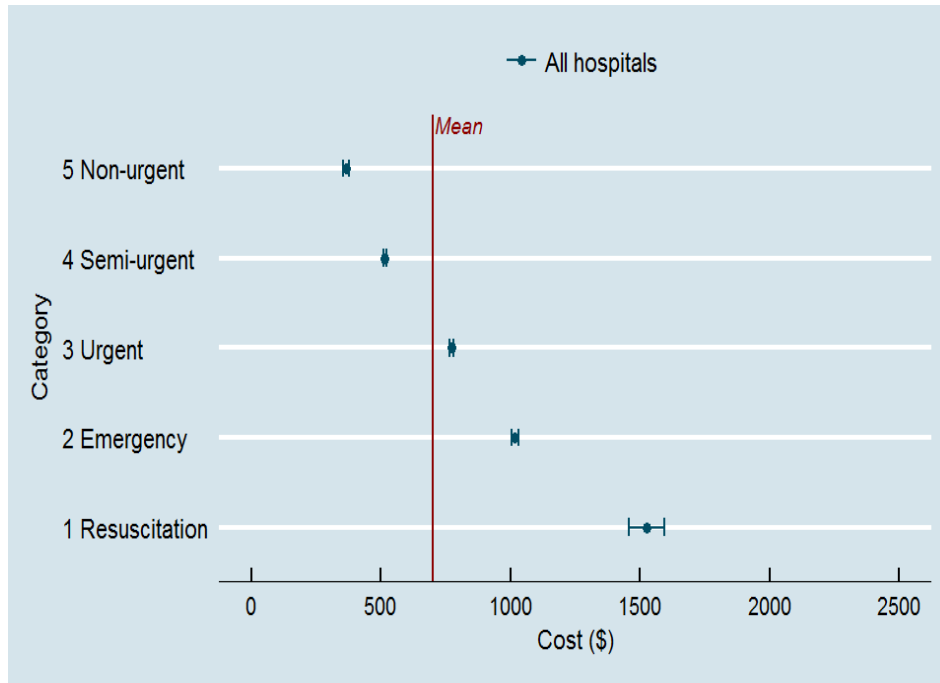
Distribution of costs



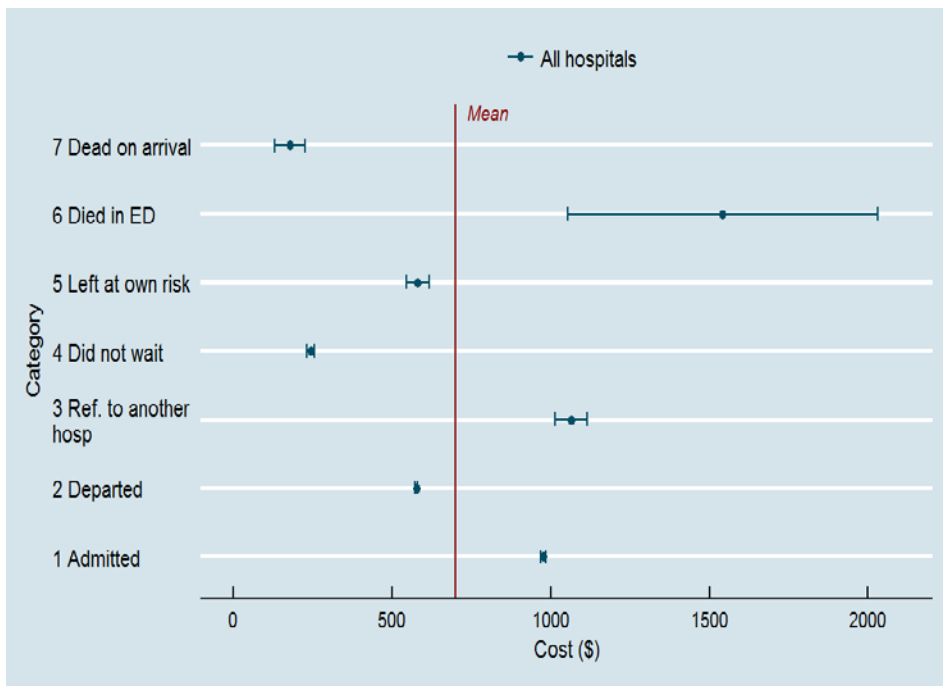
Components of cost

Cost bucket	Mean cost (\$)			Percentage		
	Direct	Indirect	Total	Direct	Indirect	Total
Total	543.7	152	695.7	100.0%	100.0%	100.0%
Ward medical	145.5	5.6	151.1	26.0%	3.6%	21.1%
Ward nursing	134.4	7.9	142.3	24.0%	5.0%	19.9%
Allied	10.0	3.1	13.1	1.8%	2.0%	1.8%
Non-clinical salaries	68.8	35.3	104.1	12.3%	22.5%	14.5%
Oncosts	34.7	12.6	47.3	6.2%	8.0%	6.6%
Pathology	47.1	6.6	53.7	8.4%	4.2%	7.5%
Imaging	59.7	10.2	69.9	10.7%	6.5%	9.8%
Pharmacy	7.6	0.3	8.0	1.4%	0.2%	1.1%
Operating room	0.1	0.0	0.1	0.0%	0.0%	0.0%
Special procedure suites	0.0	0.0	0.0	0.0%	0.0%	0.0%
Ward supplies	24.2	43.6	67.8	4.3%	27.8%	9.5%
Prostheses	0.5	0.0	0.5	0.1%	0.0%	0.1%
Hotel	5.9	8.8	14.7	1.1%	5.6%	2.1%
Depreciation	4.0	18.0	22.0	0.7%	11.5%	3.1%
Excluded	16.5	4.8	21.4	3.0%	3.1%	3.0%

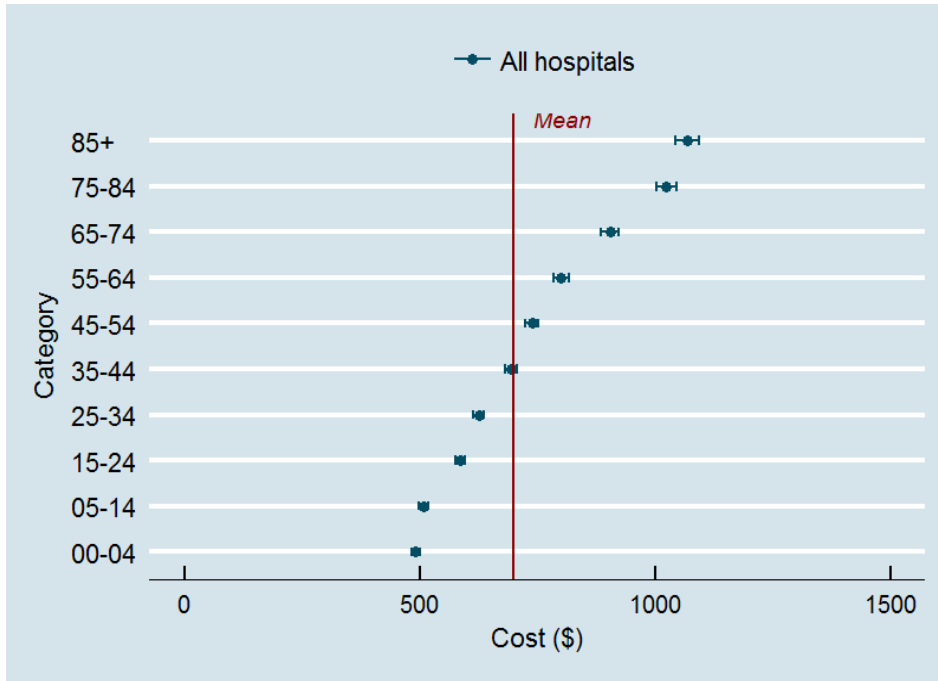
Influencers: triage



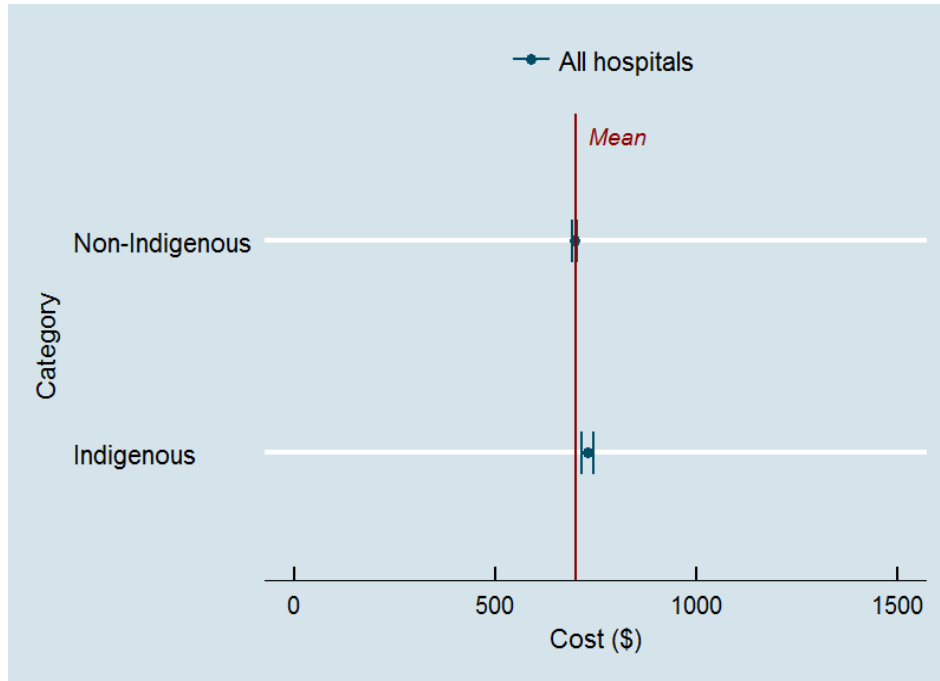
Influencers: episode end status



Influencers: age

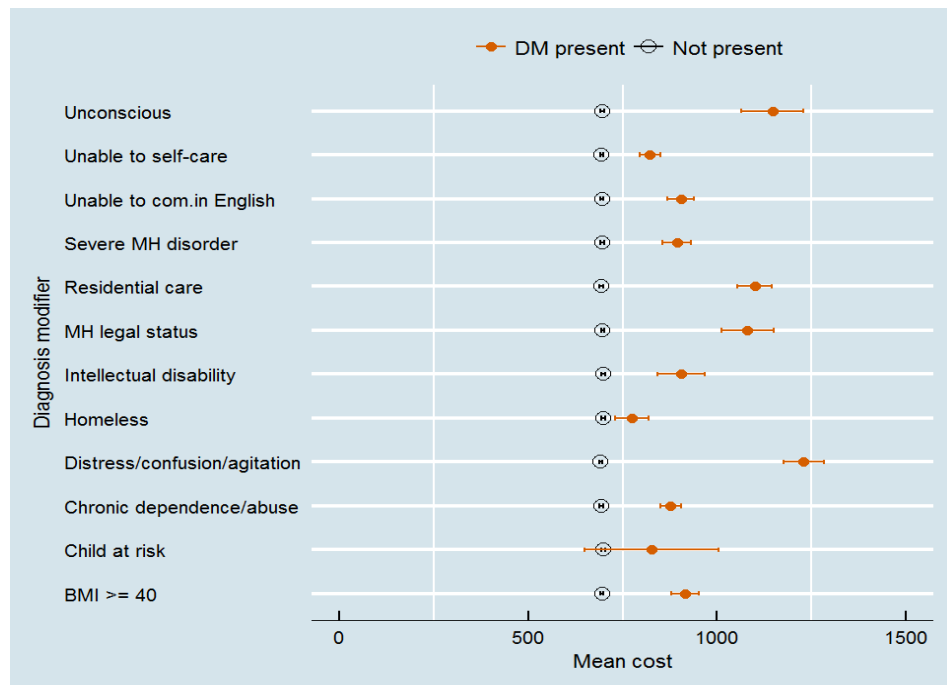


Influencers: Indigenous status



- 13.6% of ED stays in study period
- \$728 vs \$692

Influencers: diagnosis modifiers



- Unconsciousness
- Mental health legal status
- Distress/ confusion/ agitation

Challenges

- Data suggested that varying models of care influence costs
- Small volumes for some data items (e.g. diagnosis modifiers)
- Preference to report broad or non-descript categories for some data items (e.g. presenting problem)

Conclusion

What does this all mean?

Conclusion

- RVUs developed for the study provided more accurate explanation of costs
- Results from costing study were supported by clinicians
- Data set obtained from the study is suitable to support analysis for the classification development

Questions

The Emergency care costing and classification project Cost report is available from the IHPA website: www.iHPA.gov.au