

SUPPLEMENTAL MATERIAL

Title: Non-home discharge after cardiac surgery

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Supplemental Table 1: Non-home discharge locations

Discharge location	n(%)	Non-home discharge locations	n(%)
Died in hospital	210 (1.2%)	Nursing home	188 (11.3%)
Home	14569 (82.6%)	Rehabilitation	1127 (67.5%)
Other hospital	1194 (6.8%)	Mental Health	7 (0.4%)
Non-home discharge	1670 (9.5%)	Hospital in the home	310 (18.6%)
Total	17643	Other (palliative care/chronic care facility/others)	38 (2.3%)
		Total	1670

Supplemental Table 2: Raw trends in APACHE-2 comorbidities

Year	Respiratory	Cardiovascular	Hepatic	Renal
2004	6.4%	25.1%	0.11%	1.2%
2005	5.9%	22.8%	0.11%	1.6%
2006	3.2%	21.9%	0.14%	1.6%
2007	3.3%	20.3%	0.16%	1.8%
2008	2.4%	16.9%	0.17%	1.8%
2009	3.1%	17.2%	0.16%	1.7%
2010	2.9%	16.7%	0.23%	1.7%
2011	2.7%	12.7%	0.15%	1.9%
2012	2.9%	13.6%	0.26%	1.8%
2013	3.3%	13.4%	0.21%	1.8%
2014	3.2%	14.0%	0.22%	1.8%
2015	3.2%	12.8%	0.32%	1.9%
2016	3.3%	12.2%	0.25%	1.7%
2017	3.2%	12.6%	0.34%	1.6%
2018	2.9%	12.4%	0.25%	2.0%
2019	3.2%	13.7%	0.27%	1.9%

Supplemental Table 3: Multivariable logistic regression model stratified by surgery type with baseline variables

Variable	CABG		Valve		CABG + Valve	
	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Year	1.01 (1.00, 1.01)	0.047	0.99 (0.98, 1.01)	0.668	0.98 (0.97, 0.99)	0.006
Age	1.08 (1.07, 1.08)	< 0.001	1.06 (1.05, 1.07)	< 0.001	1.07 (1.06, 1.08)	< 0.001
Sex	1.75 (1.65, 1.85)	< 0.001	1.78 (1.67, 1.89)	< 0.001	1.62 (1.48, 1.78)	< 0.001
Status	0.65 (0.59, 0.71)	< 0.001	0.71 (0.61, 0.84)	< 0.001	0.88 (0.71, 1.10)	0.257
Type	2.30 (1.27, 4.19)	< 0.001	1.88 (1.03, 3.40)	0.039	2.45 (1.38, 4.23)	0.002

Supplemental Table 4: Multivariable logistic regression model stratified by surgery type with baseline variables and APACHE-3 score

Variable	CABG		Valve		CABG + Valve	
	OR (95% CI)	p-value	OR (95% CI)	p-value	OR (95% CI)	p-value
Year	1.00 (0.99, 1.01)	0.355	0.99 (0.98, 1.01)	0.551	0.98 (0.97, 0.99)	0.015
Age	1.07 (1.06, 1.07)	< 0.001	1.06 (1.05, 1.07)	< 0.001	1.06 (1.05, 1.07)	< 0.001
Sex	1.72 (1.63, 1.82)	< 0.001	1.77 (1.67, 1.89)	< 0.001	1.62 (1.47, 1.77)	< 0.001
Status	0.67 (0.61, 0.73)	< 0.001	0.76 (0.65, 0.89)	0.001	0.98 (0.78, 1.22)	0.823
Type	2.37 (1.32, 4.30)	0.005	2.00 (1.11, 3.62)	0.022	2.51 (1.42, 4.45)	0.002
APA3	1.02 (1.01, 1.03)	< 0.001	1.01 (1.00, 1.02)	< 0.001	1.02 (1.01, 1.03)	< 0.001

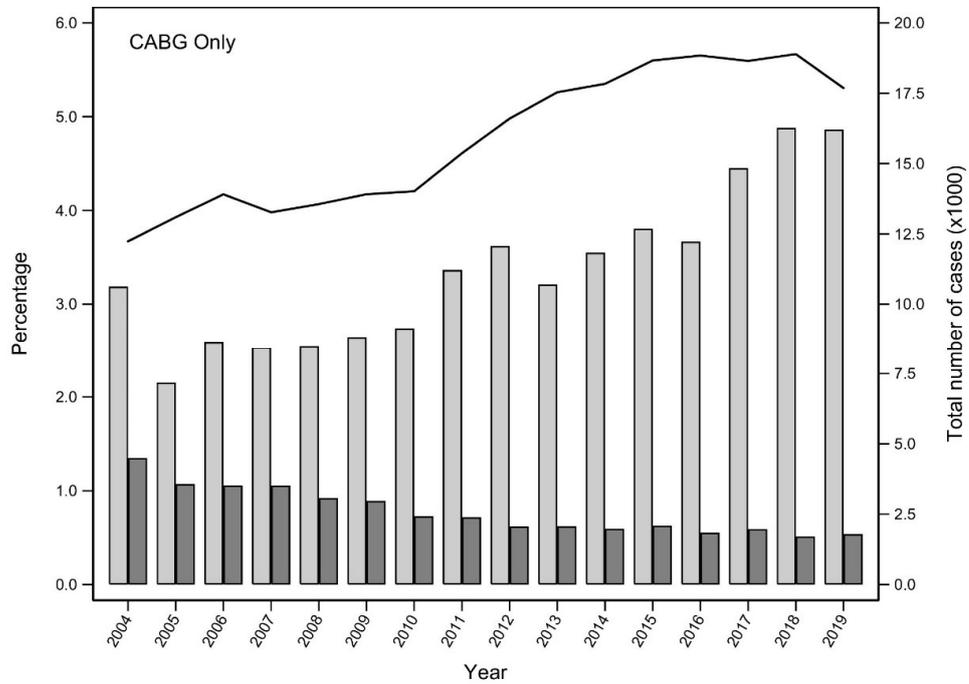
Supplemental Table 5: Comparison of patient characteristics and outcomes for patients undergoing cardiac surgery between public and private hospitals

Variable	Public hospital n=154724	Private hospital n=97569	p- value ^a
Age, y			
Median (IQR)	67 (58, 74)	70 (62, 77)	< 0.001
Male sex	115,091 (73.9%)	73,371 (74.6%)	< 0.001
APACHE-3 score, Median (IQR)	50 (41, 60)	50 (40, 60)	< 0.001
Non-elective surgery	14,173 (9.1%)	2,084 (2.1%)	< 0.001
Surgery type			
CABG only	95,886 (61.6%)	53,075 (53.9%)	<0.001
Valve only	42,705 (27.4%)	33,693 (34.2%)	
CABG + valve	17,057 (10.9%)	11,625 (11.8%)	
Country			
Australia	129,220 (56.9%)	98,050 (43.1%)	<0.001
New Zealand	26,428 (98.7%)	343 (1.3%)	
Hospital outcome			
Died	3,140 (2.0%)	1,162 (1.2%)	0.002
Home	131,547 (85.6%)	81,464 (85.1%)	
Non-home discharge	6,342 (4.1%)	8,289 (8.7%)	
Other acute hospital	12,742 (8.3%)	4,859 (5.1%)	

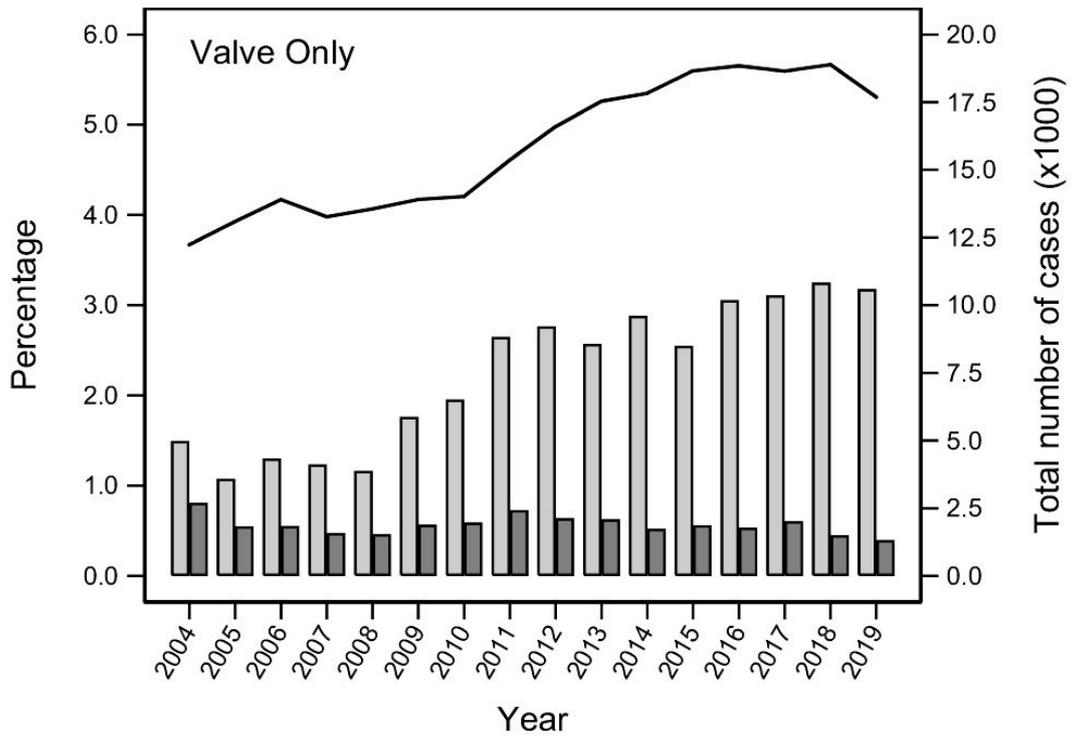
Abbreviations: Abbreviations: CABG, coronary artery bypass grafting; APACHE, Acute physiology and chronic health evaluation

a- P-values have been generated using the Wilcoxon rank-sum test for continuous variables and Fisher's exact test for categorical variables

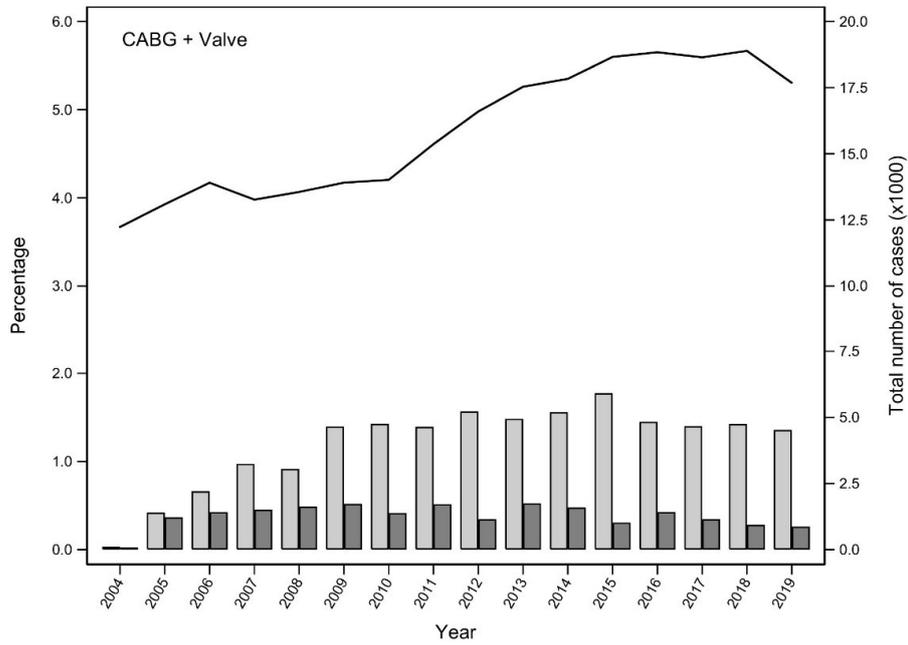
Supplemental Figure 1: Raw trends in CABG patients



Supplemental Figure 2: Raw trends in valve surgery patients



Supplemental Figure 3: Raw trends in CABG + valve surgery patients



Supplemental Table 6: Variance inflation factors

Variable	Multivariable model <i>without</i> APACHE-3 score	Multivariable model <i>with</i> APACHE-3 score
Year	6.83	6.89
Age	5.80	6.43
Sex	1.19	1.19
Surgery type		
Valve only	1.26	1.26
CABG + Valve	1.11	1.11
Surgical status	4.00	4.00
Hospital type	1.31	1.31
APACHE-3 Score	-	3.67